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PROJECT FINANCE
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Economic Relief for Companies

by Keith Martin, in Washington

The massive relief bill – the CARES Act – that cleared Congress on March 27 has several provisions that may help companies in the project finance market.

The bill is supposed to tide Americans over for the next four to six weeks. The $2.2 trillion in relief is about 10% of US gross domestic product.

Another bill will be needed if the economy sinks more than 10%. With the Senate in recess until April 20 and the House out for an indefinite period, another bill is unlikely before May.

The direct relief for which US renewable energy companies had hoped did not make it into the bill. That was an extension of deadlines both to start and finish construction of new projects to qualify for federal tax credits and restoration of something like the Treasury cash grant program where the government acts effectively as the tax equity investor of last resort. The renewables trade associations will make another effort in any follow-up relief bill that is enacted in May.

The relief in the CARES Act for companies is mainly modest tax deferral and loans.

Payroll taxes

Payment of the 6.2% employer share of social security taxes on employee wages for the period starting March 27, 2020 through the end of this year will be delayed and can be paid half at the end of 2021 and half at the end of 2022. */ continued page 2*

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CORONAVIRUS DISRUPTIONS may ultimately lead the US government to extend deadlines to start and finish construction of renewable energy projects to qualify for federal tax credits, but the effort is taking time.

Most renewable energy projects must be completed within four years after construction started to qualify for tax credits. This deadline was imposed administratively by the IRS rather than by the US tax code. (Solar and fuel cell projects face a statutory deadline of the end of 2023.)

Wind projects that started construction in 2016 are the most at risk because they must be finished by the end of this year. Wood Mackenzie, a consultancy, estimated in January that as many as */ continued page 3*

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Some companies will not have to pay the employer share of social security taxes at all during some calendar quarters this year and may receive payments from the federal government instead.

Companies can fit into this category in one of two ways.

One is during quarters when their business activities are "fully or partially suspended" by a government order limiting "commerce, travel or group meetings" due to coronavirus.

The other way is if they suffer more than a 50% drop in gross receipts in a quarter this year compared to the same quarter last year. The relief in that case lasts through the first quarter when gross receipts recover to more than 80% of gross receipts during the same quarter in 2019.

Companies falling into either category will get a tax credit of up to $5,000 per employee. If the credit exceeds the employer share of social security taxes they would otherwise owe for a quarter, the government will send a check for the excess.

The credit is 50% of wages paid to employees during covered quarters. The total credit for all covered quarters is capped at $5,000 per employee. Wages include premiums paid by employers for group medical insurance.

Congress has a hard time writing simple rules.

Companies that had an average payroll during 2019 of 100 or fewer employees can claim a credit on wages paid to all employees. Larger companies can claim the credit only on wages paid to employees who are "not providing services" due to a government stay-at-home order or collapse in customer demand.

The credit can be claimed only on wages paid after March 12, 2020.

Companies that borrow new types of loans that will be available under the bill through the Small Business Administration may have to forego the payroll tax relief. This is discussed in more detail below.

Loans

The government will be offering a variety of loans to companies in an effort to tide them over. Existing loan agreements should be checked for whether they bar such borrowing. The loans work differently depending on whether the company that is borrowing has up to 500 employees or more than that number.

The Small Business Administration will guarantee up to $349 billion in loans of up to $10 million each through participating private lenders. The loans must be used to pay payroll costs, mortgage interest, rent, utilities and interest on other debt that was outstanding before January 31, 2020. They are for companies with up to 500 part-time and full-time employees (with exceptions in a few industries where companies with more employees are still considered small businesses under SBA rules).

The US government will pay eight weeks of wages, rent and utilities for companies with up to 500 employees.

The actual amount a company can borrow is 2.5 times average monthly payroll costs during the year leading up to when the loan is made plus refinancing for any SBA emergency economic injury disaster loan (maximum amount $2 million) borrowed between January 31, 2020 and when the new loans authorized in the CARES Act become available. The total amount a company can borrow is capped at $10 million. An employee's compensation is not taken into account when calculating average monthly payroll costs to the extent it exceeds $100,000.

The loans are nonrecourse and do not require collateral. No personal guarantees are required.

The loans will require payment of 1% annual interest. Payment of interest and principal will be deferred for the first six months.

Repayment of part of the loan will be forgiven – it will turn into a grant. The amount forgiven is the payroll costs, mortgage interest, rent and utilities the borrower has to pay during the first eight weeks after the loan is made. However, the amount forgiven for spending on things other than payroll costs will be capped at 25%.

Normally when repayment of a loan is forgiven, the borrower must report the amount as taxable income. No income will have to be reported in this case.

The amount forgiven will be subject to a haircut if employee wages are cut by more than 25% and by the percentage reduction in the average monthly "full-time equivalent" employee head-count during the eight-week period. Companies can choose as a baseline for calculating the reduction in employee headcount either the average monthly headcount during January and February 2020 or during the period February 15 through June 30, 2019. The haircut for a cut in employee wages is dollar for dollar for the excess cut above 25% for any employee.

Any remaining loan balance must be repaid within two years after the loan was made.

The US government will repay lenders the part of the loan that is forgiven.

Companies interested in these loans should approach a bank or other lender that makes loans through SBA programs. The bill requires applications to be processed within 60 days. The US government hopes that the process can be more streamlined. The SBA has a current network of about 1,800 participating lenders. This network is expected to expand. The US Treasury plans to issue regulations promptly allowing all FDIC-insured banks to participate.

Loans made under the program will be assigned a zero risk weighting for purposes of bank capital adequacy requirements.

Borrowers must certify that "uncertainty of current economic conditions make necessary the loan request to support ongoing operations" and that the money will be used to "retain workers" and to pay payroll costs, mortgage payments, rent and utilities. The list of uses to which a borrower must certify does not mention use of loan proceeds to pay interest on other already outstanding debt beyond mortgage interest.

There is a tradeoff to borrow under this program. Companies doing so will not be able to claim a credit against the employer share of social security taxes for wages paid to employees, and they will not be able to push payment of the employer share of social security taxes for the remainder of this year into 2021 and 2022 if any part of the SBA loan is forgiven.

More loans

Congress set aside $454 billion to support Federal Reserve Board efforts to shore up liquidity in the corporate and state and local government debt markets.

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15,000 megawatts of new US wind capacity could be installed this year, but said that 9,000 megawatts of it was at risk of slipping into 2021 – before coronavirus hit. Some developers whose projects slip may be able to get more time by proving they made "continuous efforts" after construction started to advance the projects. Not all projects have this option.

Senior Treasury and IRS officials who are key to extending the administrative deadline are having to focus immediate attention on implementing the CARES Act that passed Congress on March 27 (see related story on page 1 of this issue).

Any changes in statutory deadlines, like additional time to start construction, would require action by Congress. The Senate is in recess until at least April 20, and the House is out indefinitely until called back by House leaders.

Talk is growing of another coronavirus relief bill. President Trump and House Speaker Nancy Pelosi talked within days after the CARES Act passed about using the next bill to focus, in part, on US infrastructure. However, as the number of new US coronavirus cases continues to climb, Pelosi suggested on April 3 that the next bill is more likely to involve changes in dates and dollar amounts in the CARES Act to ensure the relief measures taken in it to stabilize employment and keep businesses afloat are adequate. Stimulus measures to help with economic recovery are more likely to be the focus of another bill in June.

The renewable energy trade associations are asking for more time to start and finish construction and would like the Treasury to pay all or part of the cash value of tax credits for an interim period to address weakness in the tax equity market.

Some European countries have already extended their deadlines to ensure that projects are merely delayed rather than canceled.

For example, Bundesnetzagentur, the federal grid agency

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US Treasury Secretary Steven Mnuchin said the $454 billion could lead to up to $4 trillion in additional lending capacity.

The $454 billion is a form of Congressional buy-in to cover losses on loans to any businesses that fail.

The US Treasury is supposed to work with the Federal Reserve Board to set up a new facility to provide financing for banks to lend to businesses at interest rates no higher than 2% with no interest or principal due on the loans for the first six months.

The loans are for "mid-size" businesses with between 500 and 10,000 employees.

Borrowers must promise to get to at least 90% of their February 1 employee headcounts at full compensation and benefits within four months after the current federal public health emergency declaration ends. The US has been in a state of public health emergency for coronavirus since January 27, 2020.

Borrowers cannot "outsource or offshore" any jobs during the loan term plus two years and must remain neutral to any union organizing effort. They must be US companies with a majority of their employees based in the United States.

They cannot pay dividends on common stock or buy back any equity security listed on a national exchange while the loan is outstanding.

The bill authorizes another $46 billion in targeted direct lending and loan guarantees by the US Treasury to airlines, cargo air carriers, travel agents and "businesses that are critical for maintaining national security." The amount earmarked for critical businesses is $17 billion. It is unclear what businesses will be considered critical for national security, but presumably utilities, pipelines and transmission companies fall into this category.

Loans out of the $46 billion will be as short term as possible, but not longer than five years. The interest rate cannot be less than the market rate for comparable obligations before the COVID-19 outbreak.

Before the Treasury can make a loan or loan guarantee from the $46 billion, it must determine that credit is not reasonably available to the company and the loan or loan guarantee is "prudently incurred" and is "sufficiently secured." At the same time, the borrower must be expecting losses "such that continued operations of the business are jeopardized."

Companies borrowing part of the $46 billion cannot reduce employee headcount through next September 30 by more than 10% from the headcount on March 24, 2020. They cannot pay dividends or make other capital distributions on common stock or buy back any equity security listed on a national exchange while the loan is outstanding plus one year.

The government will insist on a warrant or other equity interest in companies tapping into the $46 billion so that US taxpayers benefit from any appreciation in share value. The Treasury has discretion to agree instead to a senior debt instrument with an interest-rate premium from companies that are not publicly-traded.

The other relief in the CARES Act for companies is mainly modest tax deferral and loans.

An additional drawback of tapping into the $46 billion is companies will have to agree to limits on executive compensation.

Officers and other employees whose total compensation was more than $425,000 in 2019 cannot be paid more than that amount in any 12-month period, while the loan or loan guarantee is outstanding plus one year. They cannot be paid severance during that period of more than two times 2019 total compensation.

Anyone whose 2019 total compensation was more than $3 million will have to take a pay cut. Total compensation during any 12-month period, while the loan is outstanding plus one year, cannot exceed $3 million plus half the amount of 2019 compensation above $3 million.

Total compensation for these purposes includes not only salary and bonuses, but also stock awards and other financial benefits.

No assistance will be available under the $494 billion or the $46 billion to any company in which a member of Congress, agency head, Trump, Pence or their spouses, children, sons-in-law or daughters-in-law own at least a 20% interest by vote or value.

Details about assistance provided will be published on the Treasury website or in a report by the Federal Reserve Board to the banking committees in Congress. Disclosure of direct Treasury loans and loan guarantees will include copies of the final term sheet and other transaction documents.

The authority to make new loans, loan guarantees or other investments under these facilities ends on December 31, 2020. Existing loans and loan guarantees on that date can be restructured or amended, but cannot be forgiven or extended to run longer than five years from when the loan was originally made.

And more loans

Separately, the Federal Reserve Board said on March 23 that it will make direct loans to companies that are rated at least BBB-/Baa3 through a special-purpose vehicle funded by the New York Federal Reserve Bank.

Borrowers will be limited to borrowing a percentage of the highest amount of outstanding debt they had on any day in the last year running up to March 22, 2020. The percentage is 110% for BBB/Baa credits and rises to 140% as credit quality improves to AAA.

This Fed window will remain open through September 30, 2020. It is called the primary market corporate credit facility.

The interest rate and other terms will be "informed by market conditions." The loans cannot run longer than four years. Interest during the first six months can be added to loan principal rather than paid currently. Borrowers cannot pay dividends or engage in share buy backs during the period they are not paying interest. The loan can be called at par without any prepayment penalty. A commitment fee of 100 basis points must be paid.

Other tax relief

Two other provisions in the CARES Act are worth mentioning, but are unlikely to be of much help to project developers.

The 2017 US tax reforms made it more difficult for the country to pull out of a recession. One change stopped companies from carrying back net operating losses or NOLs to get refunds of past taxes and limited losses carried forward to future years from offsetting more than 80% of future

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in Germany, said in March that developers of new onshore wind, solar and biomass plants will be given more time to finish construction to claim subsidies for which the developers qualified through state-run auctions. Developers must ask for more time by email or letter and give a reason.

The Polish Wind Industry Association is asking for a statutory change to extend project deadlines by up to 12 months. Italy and Greece extended various deadlines for renewable energy projects in March. Turkey did so on April 2. France, Ireland and Portugal have delayed auctions.

The Ministry of New and Renewable Energy in India said on March 20 that it will treat delays caused by coronavirus as a form of force majeure that excuses late performance. Developers must submit evidence to support their claims.

Wood Mackenzie reported in its updated wind industry forecast in March that the outlook in the United States for new wind capacity additions this year remains fluid. It said US construction companies report that supply chains remain intact, in part because a lot of new construction is in the central US and in rural areas where the coronavirus has not spread as widely and where states have not issued stay-at-home orders, but that recent closings of truck rest stops along major highways are causing concern and still-to-be-delivered high-voltage equipment is being closely monitored.

The Solar Energy Industries Association said results from a member survey still in progress on March 27 suggest that the general trend is worse each day and that the most severe effects are being felt by rooftop solar companies. Fewer than 10% of residential rooftop companies reported business as usual, while 60% reported severely reduced activity. About 50% of so-called C&I solar companies that focus on the commercial and industrial sector reported substantial reductions in business.

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income.

The CARES Act allows losses in 2018, 2019 and 2020 to be carried back five years – so as far back as 2013 – to get refunds of any taxes paid. Losses carried back to 2017 or an earlier year will offset corporate taxes at a 35% rate (as opposed to the 21% rate that took effect in 2018).

As for carryforwards, the 80% limit will not apply to 2018 or 2019 losses carried to 2019 or 2020.

The 2017 tax reforms also made it more expensive to borrow money. Interest can only be deducted up to 30% of "adjusted" taxable income for the year.

The CARES Act increases the amount to 50% for 2019 and 2020 and lets companies use 2019 adjusted taxable income for the 2020 calculations. However, if a company has no income in either year, then 50% of $0 is $0.

Regulated utilities are not subject to the cap on interest deductions. Most independent power companies, which are subject to it, are in a net tax loss position. The cap is applied at the partnership level for projects that are owned by partnerships. (For more detail, see "Cap on Interest Deductions Explained" in the December 2018 *NewsWire*.)

Most companies can add back depreciation to taxable income through 2021 when arriving at "adjusted" taxable income. This makes the cap less likely to come into play because 30% — or now 50% — will be that percentage of a higher number.

However, the IRS took the position in proposed regulations in late 2018 that manufacturers cannot add back depreciation. Companies that generate electricity are considered manufacturers for this purpose. The Trump administration has been lobbied heavily to back off the position. Final regulations are expected imminently. The White House office — OIRA — that reviews tax regulations before they can be released finished its review on March 20.

Section 139 of the US tax code — enacted after the terrorist attacks on the World Trade Center and the Pentagon on September 11, 2001 — may also provide some relief. It spares individuals from having to pay taxes on payments to cover "personal, family, living [and] funeral expenses" connected to a federally-declared disaster. This should shield not only government payments, but also payments from employers from income taxes. Any employer making such a payment would still be able to deduct it, and the payment would not count as wages for purposes of social security and other employment taxes.

Aftermath

A challenge after the US moves into economic recovery will be how companies are supposed to climb out from under all the debt and deferred taxes that the relief measures will pile on. The hope must be that revenue lost during the coronavirus downturn is merely deferred revenue that pent-up consumer demand will help to restore later. ◎

Coronavirus: The Tax Equity, Debt and M&A Markets

Tax equity for renewable energy was expected to be a $15 billion market this year, and interest rates on bank debt had dropped to 125 to 137.5 basis points over LIBOR – before the coronavirus hit. Is financing still available for power and infrastructure projects? Has there been any change in availability or cost of tax equity, bank debt, B loans and project bonds? How have asset valuations been affected?

A panel discussed these and other questions during a call on March 25. The panelists are Jack Cargas, managing director and head of originations on the tax equity desk at Bank of America, Yale Henderson, managing director and head of energy investments for JPMorgan, Ralph Cho, co-head of power and infrastructure for North America for Investec, Max Lipkind, managing director and head of energy and power leveraged finance for Credit Suisse, and John C.S. Anderson, global head of corporate finance and infrastructure at Manulife. The moderator is Keith Martin with Norton Rose Fulbright in Washington.

Tax Equity

MR. MARTIN: Jack Cargas, how is coronavirus affecting the supply of tax equity? Many companies are suffering big losses that have to affect tax capacity.

MR. CARGAS: We have not seen a huge negative impact on the tax equity market so far. We are well aware that some observers are predicting significant tax equity market dislocation in 2020 due to the virus and, as we all know, markets can change quickly. We have heard rumors that one or two tax equity investors have pressed pause on investing, but the investors in question are episodic participants. It is too early to call it a market trend.

Over time, the tax equity market has developed a core competency in handling disruption. Examples include how the market handled the 2008 financial crisis and 2017 tax law changes. Maybe that core competency is not enough to help us through everything, but hopefully the experience can provide a road map for dealing with the virus in the tax equity market. The virus could be just another type of disruption.

MR. MARTIN: Yale Henderson, is the tax equity market still functioning?

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Liquidity concerns are mounting, but they vary by sector. Moody's, the rating agency, said in mid-March that coronavirus could affect the credit quality of as many as 45% of companies in North America. March saw the fastest ratings downgrades by the three major rating agencies, S&P Global, Moody's and Fitch, since at least 2002, according to a report by Bank of America. However, Moody's said it expects only 16% of North American companies to suffer downgrades under its baseline scenario where economic activity recovers by the second half of 2020.

The Economist magazine reported on March 14 that a crude "cash-crunch stress test" that it did by looking at financials for 3,000 non-financial companies outside China suggested that 13% would exhaust cash within three months and the number would increase to close to 25% if the economic shutdowns last six months. The test assumed that revenues would drop by two-thirds without any reduction in operating costs.

S&P Global said it expects "a modest weakening of credit quality" among North American utilities. Its median utility rating of A- could fall to BBB+.

The trade press is full of reports of new asset sales. Some developers may need cash. It is not clear how many of these transactions will close if discount rates used to value projects increase due to greater perceived risk, causing bid-ask spreads to widen.

Buyers in such deals are now focusing on a series of coronavirus-related issues during diligence. They include force majeure claims by contractors and suppliers, notices that have to be given to contract counterparties and whether they have set a clock running on rights to terminate power purchase agreements, possible exercise of cancellation rights under MAC clauses on account of material adverse changes, going-concern issues in audits, potential insurance claims and possible grounds for purchase price adjustments.

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MR. HENDERSON: Wholeheartedly, yes. I think Jack summarized it well. It is business as usual as much as possible for us. We are working hard to execute on every awarded transaction, and I am sure that is true for a majority, if not all, of the significant long-term players in the tax equity market. As Jack said, there may be a few of the newer players, if not fully dedicated players, hitting pause at the moment as they try to figure out what their long-term situations are. JPMorgan is committed to this market long term, and it continues to think this will be its biggest year yet.

MR. MARTIN: Both of you invested $3 billion last year. Yale, you told me before coronavirus hit that you were planning to get to $4 billion this year. Does that mean you will be somewhere between $3 and $4 billion?

MR. HENDERSON: Definitely, if not above that.

MR. MARTIN: Mike Garland, CEO of Pattern Energy, said on a CEO call we hosted Friday, "The market, for the most part, is uncertain in that we are seeing people starting to back off a little bit in both the tax equity market and the lending market because they are unsure about availability of capital and the pricing. It is more about pricing. A lot of the banks are saying it will cost more to go forward with these projects. Some of them are starting to say, 'Maybe the entire market is headed for a slowdown, so I would rather close on some good projects while I can.' There is general uncertainty all around."

Listening to you, Yale, you do not see that from where you sit.

MR. HENDERSON: Quality projects will be able to find financing even in uncertain times. We have a very full plate. Our biggest constraint continues to be human resources and our ability to execute on the number of opportunities that we think fit our criteria and that we want to pursue.

There is no cost-of-capital or pricing issue at the moment, although we are certainly attuned to movements in our bank's underlying cost of funds, but that is something we believe can be managed as it has through various other cycles.

MR. MARTIN: Going back to Jack Cargas, do you foresee any change in terms for tax equity deals that close over the next few months?

MR. CARGAS: Not significantly. At Bank of America, it is business as usual to the extent possible. As our CFO said earlier this week to the press, we are here to be part of the solution and coronavirus is not an opportunity to impose more stringent terms and conditions. We intend to live up to our existing commitments. We will continue to selectively seek new business in much the same way as before, always keeping a clear focus on maintaining our investment risk parameters.

MR. MARTIN: Yale Henderson, any change in terms?

MR. HENDERSON: No. Knock on wood, the virus hopefully will not affect the underlying terms and conditions. Like Bank of America, we are not using this as an opportunity to improve on terms. We underwrite each deal on its individual merits and determine what are the appropriate terms and conditions for that particular transaction, just as we have for the last 15 years.

MR. MARTIN: Has either of you sent out a term sheet for a new deal in March?

MR. HENDERSON: We just got approval to send a letter of intent yesterday, so yes. We are actively engaged in talks about new opportunities and are engaging with customers on deals that we believe fit our underwriting criteria.

MR. CARGAS: We have continued to engage in LOI negotiations during March. The 2020 tax equity market has a dynamic that we had predicted during our cost-of-capital call before any knowledge of the virus. We expect increased demand for tax equity this year and, in response to that expectation, many sponsors came to the market early in mid- to late 2019 with 2020 projects. We are working toward crystalizing those transactions.

Many of those transactions are portfolios of four to 10 projects. Portfolio deals require a lot of effort to get done. So even before we knew of the virus, the market was already expected to be in overdrive this year.

It is not necessarily the right metric to focus on how many new term sheets or letters of intent are being issued. The reality is there are a lot of deals in the pipeline. Market volume may still set records this year because wind projects have to be finished by year end to qualify for tax credits at the full rate.

MR. HENDERSON: I agree completely with Jack on that front. As the three of us discussed on the January cost-of-capital call, this market was already very hot and we had awards in place in 2019 and made additional awards in January and February 2020 for deals to close this year on a much more rapid pace than we had ever seen before. The groundwork for a very busy year was already laid well before coronavirus led to a halt in business travel.

MR. MARTIN: I am watching the questions come in from listeners. One question being asked repeatedly is whether the $2.2 trillion relief bill the Senate is expected to pass today extends deadlines for renewable energy projects to qualify for tax credits. It does not.

Early drafts of the bill authorized spending $3 billion to buy more oil for the strategic petroleum reserve in an effort to prop up oil prices. That did not make the final bill either. The renewables industry will try again in a fourth-round stimulus bill, perhaps in another four to six weeks, to extend the deadlines to start construction and will be talking to the Treasury and IRS about more time to finish projects.

Moving on, let's move into a lightning round of tax equity questions with quick answers. Yale Henderson, you predicted in January that the market would be a $15 billion market this year for renewable energy tax equity. What are you expecting today?

MR. HENDERSON: We fully plan on being in that vicinity at least from a JPMorgan standpoint.

The two biggest tax equity investors say they are operating at close to normal.

MR. MARTIN: That does not tell me the market as a whole. Do you have a sense whether we will get to $15 billion or even the $12 to $13 billion that the market reached last year?

MR. CARGAS: I don't think anyone knows yet. There will continue to be significant demand. We are sure of that, but we do not know whether there will be construction delays or major supply-chain disruptions. We are seeing some force majeure notices. It is hard to guess at the final market size when there are exogenous factors that will affect transaction volume that are not in our control as tax equity investors.

MR. MARTIN: Do either of you have any concerns about cash flow in the renewable energy market and, if so, on what types of projects? Does that then affect availability of tax equity for those types of projects?

MR. HENDERSON: Nothing new. The offtake contracts have been transitioning over the last several years to less robust revenue contracts. The nature of those contracts and how they are affected by the current environment / *continued page 10*

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Electricity demand is down in most parts of the United States, but not everywhere.

S&P Global reported that average hourly load was down in six of eight major power markets in March 2020 compared to March 2019. Average hourly load was down 8.9% in both PJM and New York. It was up 1.4% in ERCOT. March peak load was down 18.7% in PJM, 13.4% in New York and 13.1% in ERCOT compared to the year before.

The California grid operator, CAISO, reported weather-adjusted load reductions of 5% to 8% on weekdays and 1% to 4% on weekends compared to 2019 "due to a shift from commercial, restaurant and retail hubs to residential consumption."

ASSET SALES can trigger taxes in multiple US states on the gain.

A Michigan court said in March that the formula the state used to calculate the share of gain on which taxes had to be paid in Michigan after a Minnesota company was sold led to too large a share being attributed to Michigan. It told the company and the Michigan tax department to work out a more reasonable number.

Minnesota Limited, Inc. was a family-owned business in Big Lake, Minnesota that grew to 600 employees during peak seasons. It builds, maintains and repairs oil and gas pipelines and does occasional cleanup after spills. It operates in 24 states. Its jobs are on a contract-by-contract basis. It has no office or permanent employees in Michigan.

Enbridge, a pipeline company, hired it in 2010 to clean up after a major pipeline spill near Kalamazoo, Michigan. The job took into early 2011 to complete.

This was around the time that Minnesota Limited, Inc. was being sold after the health of one of the two siblings that owned the company declined. The company sale closed on March 31, 2011. The buyer paid $80 million. The buyer and seller / *continued page 11*

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is obviously something on which we are focused. Hopefully the coronavirus will have a fairly short-term impact and these are long-term projects, so there should not be any more heightened concern.

MR. MARTIN: So it is still possible to finance hedged projects that sell into the spot market?

MR. HENDERSON: Yes. The terms and conditions for such deals have been evolving over time, not because of sudden events like coronavirus, but because we learn more and see more actual results over time. As we become more knowledgeable and experienced, we refine our views about how such deals should be structured and how we want to proceed with them.

MR CARGAS: We look at the identity of the counterparty, the price, the tenor—all of those things will be evaluated. If the hedge looks pretty similar to what we have supported in the past, we expect it to continue to be a supportable offtake arrangement.

Uncertainty about whether projects will make deadlines will eventually affect tax equity volume.

MR. MARTIN: Two more questions. We have talked in the past about wind projects that started construction in 2016, but will not be finished this year. Both of you have said that your institutions had not decided yet whether you would finance 2016 projects that slip into 2021. Are you closer to a decision?

MR. CARGAS: Our view is that we need to comply with both the letter and the spirit of the IRS rules. It is not terribly clear what the IRS requires as proof that there were continuous efforts over the four years to advance the project. Sponsors need to prove that to be allowed more time. We need guidance.

MR. MARTIN: The last question is whether there is any correlation between collapsing share prices in the stock market and the supply of tax equity?

MR. HENDERSON: Not that I am aware.

Bank Debt

MR. MARTIN: Ralph Cho, how is coronavirus affecting the supply of bank debt?

MR. CHO: Market conditions are choppy. Unlike institutional lenders who react with lightning speed to market changes, term loan A lenders are more of a lagging indicator. Most banks will tell you that they are open for business, but it would not surprise me if credit risk officers are challenging deals and scrutinizing them more than ever before. Deals that were already in the market are being approved. People are still working toward closings, but the process is slower, in some cases painfully so.

We are getting a lot of last-minute questions from risk officers about the impact of coronavirus on projections. You can tell they are getting nervous right before the deals close.

It will be more challenging to do new deals that are not already in the pipeline. I certainly do not see any aggressive underwriting options being pitched to sponsors today.

South Korean capital has accounted for a large part of the liquidity in the term loan A market lately. South Korean capital has slowed down quite a bit due to increased foreign exchange risk, general market volatility and an inability to fly here to do diligence. This has forced many Koreans to take a pause.

MR. MARTIN: That may answer my next question, which is has there been a change in terms for loans that are closing?

MR. CHO: There are not enough market comparables to tell whether there has been a general change in credit terms. Borrowers have been suggesting that we assume that market conditions will come back to normal, so let's put current economic conditions to the side. The credit structures that we are offering remain largely in line with precedent, but certainly we are looking at financing structures that can weather higher stress scenarios.

Pricing is certainly going to move depending on where liquidity shakes out. Pricing on smaller deals will be easier to maintain. Status quo pricing may be harder to maintain in larger transactions where you need the cooperation of more lenders. Market uncertainty and the risk of defaults is already driving up the cost of funds for some banks.

MR. MARTIN: We hear that the spreads being quoted for new deals, where there are such quotes, are all over the map in a sign of the general uncertainty about where the market is headed. Are you seeing that as well?

MR. CHO: Yes. It is a form of price discovery. We have a deal that we are closing next week. Fortunately we were in the market for funds before the crisis hit, and so we are maintaining pricing. If I had to go back out again today to raise funding, how much wider would it be? I have spoken with some of my peers. If you recall, pricing got as ridiculously tight as LIBOR plus 75 basis points on short-term construction loans. Are those deals available today? Probably not. If you force the bank to close on a deal today, how much wider would the spread be? It looks like 25 to 50 basis points wider. That is not a big jump based on comparable pricing in the public debt market.

MR. MARTIN: Have you issued any letters of intent or new term sheets in March?

MR. CHO: We are putting out indicative term sheets, yes.

MR. MARTIN: Do you expect to close the deals in the next couple months or are the term sheets subject to caveats that mean no closing unless market conditions improve?

MR. CHO: Again, our borrowers are asking us to assume there is a return to normal market conditions. Generally our clients are not pressed for cash. They are not saying, "Let's close, and I don't care what the pricing is." Certainly, if we had to close today, the pricing would be worse. They are asking us to price deals that will close when the market returns to normal. I don't have a crystal ball. Is that two weeks from now? Four to six weeks? We want to be constructive and give our borrowers feedback on what is doable when market conditions normalize. I think a lot of banks will be nervous closing blindly into current market conditions.

MR. MARTIN: The federal government is printing a staggering amount of money through Federal Reserve Bank purchases and the fiscal stimulus measures. Trump said we are at war. We know from past wars where spending skyrockets that inflation follows. Are there growing inflation concerns, and if so, how will they play out in deals? I have also heard a counter argument that deflation is the biggest concern.

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made a section 338(h)(10) election at the federal level to treat the share sale as if the buyer bought the company's assets.

Michigan collects a business tax of 4.95%.

Like other states, Michigan starts with the adjusted taxable income reported on the federal return and then apportions part of it to Michigan. It uses a single-factor formula to determine how much of the income that a multi-state company earns in a year should be apportioned to Michigan. The formula is Michigan sales as a percentage of total sales.

Minnesota Limited, Inc. said the percentage for 2011 was 14.986%.

The state tax department said the percentage should have been 69.9761%. It said the company incorrectly included the gain on the sale of the company in the denominator of the sales fraction.

The company argued the gain was sales income that should be taken into account in the sales fraction, but that it belonged in the denominator because it should be attributed to Minnesota.

Alternatively, it argued that the gain should not be taxed at all in Michigan since it was nonbusiness income not earned in the regular course of business that was earned outside the state. The value built up over time based on work in 24 states.

The Michigan claims court said it does not "necessarily disagree" with how the state tax department applied the statutory apportionment formula, but the result was untenable. It said that not only had the value reflected in the company sales price built up over many years, but also most of the activity had no connection to Michigan and the distortion was compounded because the sale occurred in a year when the company just happened to have a major job in Michigan.

The result was unconstitutional under the Commerce Clause of the US constitution, the court said. The Commerce

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MR. CHO: I know people are thinking about it. I have not heard any direct concerns about inflation, but I have to imagine that the inflation assumptions embedded in financing projections and power pricing curves are going to come under greater scrutiny.

Term Loan B

MR. MARTIN: Let's switch to Max Lipkind with Credit Suisse and the term loan B market. Max, is the B loan market still open?

MR. LIPKIND: Ralph commented on the velocity of change in the traditional bank market. The institutional debt market, which is the term loan B as well as the high-yield market, is much quicker to react and that has been very much the case this go-around.

The B loan market has sold out some 20 points over the last couple weeks and stands at 76¢ on the dollar as of yesterday, which is the lowest . . .

MR. MARTIN: That is what the average B loan debt instrument trades for today compared to the face amount?

MR. LIPKIND: Correct, which is the lowest level we have seen since the financial crisis in 2008. In terms of spread, what that implies is a widening to 625 basis points over LIBOR and a yield of about 11%.

In terms of primary activity over the last two to three weeks, there essentially has been none and for all intents and purposes, new issue markets are closed.

Let me give a few other data points.

Since March 9, we saw the four single worst daily sell-offs in the term loan B markets in the history of the market. We now have about just shy of $700 billion in loans trading below an $80 price, which compares to about $470 billion in the fall of 2008. That number is four times what we saw just on March 16. That below-$80 price segment represents 57% of the market. Ninety-seven percent of the market is trading below a $90 price. It was just 16% a couple weeks ago.

On the more distressed side of things, we have seen 15% of the overall market trade below a $70 price, compared to just 2% at the beginning of the year.

In short, the B market is deeply dislocated. I would not call it open right now, although we have seen some encouraging signs over the last couple days. Specifically, some of the larger liquid names were up yesterday a couple of points and they have been up three or four points over the course of today's trading session. There are some green shoots there, but, notwithstanding, it is a pretty deep dislocation.

Let me make a couple comments about the high-yield index, essentially the securities cousin of the B loan market. That index stood at 14.4% as of last night, which is 870 basis points wide of the levels we saw at the beginning of the year when the high-yield index was yielding roughly 5.55%. Thus, the move has been even more pronounced in high yield, which makes sense given the largely unsecured nature of that market.

I would be remiss not to talk about the impact the sell-off in the energy sector has had on the overall indices. The CS energy index is yielding somewhere in the 28% range and has returned a staggering negative 45% return year to date. Virtually every pocket across the oil and gas universe has been affected with some of the Permian E&Ps suffering some of the sharpest declines. The sell-off has been broad.

MR. MARTIN: Before going on, B loans are for riskier credits. These are single B and double B credits, correct?

MR. LIPKIND: That's correct. By and large, B loans would not be investment grade.

MR. MARTIN: And this is bank paper placed with institutional lenders.

MR. LIPKIND: That's correct. The institutional investors range from the Korean investors that were mentioned earlier, CLOs, exchange-traded funds, and asset managers such as Fidelity, Franklin Templeton and others. B loans are placed across a very broad swath of investors, but CLOs have been the largest player over the last few years.

MR. MARTIN: We heard on our cost-of-capital-outlook call in January that pricing for B loans was in the 250- to 375-basis-point range over LIBOR. You are now saying the spread is 625 basis points, correct?

MR. LIPKIND: It varies. Let me give a few data points.

Not every sector will be affected uniformly and a double B credit in the oil and gas sector is not going to price like something that is less cyclical.

B loans to independent power producers are trading currently at an average of an $80 price, which is an all-in yield of about 8%. The larger power producers with more diversified portfolios trade in the low 80s – 83¢ or 84¢ on the dollar—and that is yielding about 9%. The single-asset, smaller deals are off a little more, particularly the ones that are less hedged. The yields on them are now in the double digits. It is hard to say that the market has moved from a spread of 350 to 650 basis points or to put a dollar price on it because we have not seen a ton of primary activity.

Project Bonds

MR. MARTIN: Let me bring John Anderson into this conversation. John, we heard the term loan B market is pretty much shut down. What about the bond market?

MR. ANDERSON: The bond market is dominated by life insurance companies, and we are liquid in the current environment. We fund ourselves from the ongoing premiums coming in from life insurance policies. Our investors cannot call us out. They cannot ask for their money back early, so we remain active buyers in the public bond market. We are working on project transactions right now and, like you heard from Ralph Cho, the borrowers are saying to let the markets settle a bit before we try to figure out a price that works for both sides.

The advantage we have is we price off the liquid public bond market, and there has been a fire hose of new issuances over the last week and a half, so we have plenty of benchmarks to set pricing. In January, we were looking at project finance pricing at 3.5% to 3.75% fixed interest rates.

Roll forward to today and the broad market is easily up 200 to 300 basis points.

Let me make that more specific for you. If you were looking at a single A corporate bond at the end of January, it would have paid an interest rate of 2.5%. Today, to bring a new deal to market would require interest of 4.7%. A BBB issuer that could get an interest rate of 2.8% at the end of January is probably looking at 5% to 5.5% today. A BBB- issuer—these are corporate, so a more liquid market—might have come to market at the end of January at 3.3%, but would have to come to the market this week at 7%.

I will make a couple observations. Last week we had $63 billion come to market in new investment-grade public bond issuances. That is the fifth largest week of the market of all time and the largest Friday we have ever seen in the public bond market.

If you are looking at pricing benchmarks today, you might well say it is better value for the borrower to structure a loan to a BBB credit quality and come to market at 5.5% rather than push it to BBB- and be looking at 7%. The pricing for incremental risk may not be great value to the issuer.

These are real benchmarks, and they are in a very disrupted place. As I said, our borrowers in the project finance sector who do not need money this week are not necessarily trying to figure out pricing this week. The market came */ continued page 14*

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Clause bars states from imposing taxes that discriminate against out-of-state companies or impede interstate commerce. However, rather than set aside the formula, it said state law allows taxpayers to propose alternative apportionment percentages and told the parties to work something out.

The case is *Vectren Infrastructure Services Corp. v. Department of Treasury*. The court released its decision on March 12.

CFIUS FILINGS for US in-bound acquisitions will be more expensive in the future.

The US Treasury proposed collecting fees of up to $300,000 on future filings in March.

The United States has an inter-agency committee of 16 federal agencies that reviews foreign acquisitions of US businesses for possible national security implications. Few transactions are blocked altogether, but the committee not infrequently requires changes in business terms and, in five cases, US presidents have blocked sales.

Filings with CFIUS — the Committee on Foreign Investment in the United States — used to be purely voluntary. The risk of not filing is the US can take action after learning of the transaction later. However, some filings have now become mandatory as of February 13, 2020.

Filings are mandatory in two situations. One is where a foreign government acquires a substantial interest in a US business that handles critical technologies, critical infrastructure or sensitive data. The other is when foreigners acquire interests in US businesses that make critical technologies for any one of 27 specific industries.

Filings can be made by short-form declaration that requires less information and has a shorter review period than a full filing. However, after reviewing a short-form declaration, CFIUS may ask for a full filing.

Full filings are a significant undertaking. (For the most recent data */ continued page 15*

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back last week with a lot of very high-quality issuances as it will through the coming weeks. That new-issue population will expand. We will get better benchmarks, and we will have a better ability to figure out a price that works for both sides.

MR. MARTIN: So the project bond market is still open, rates have gone up, but people are willing to lend. Are there any signs of potential liquidity issues?

MR. ANDERSON: The life insurance community should be well capitalized and have money to invest. At our shop, we lent $550 million last week alone and put out $200 million this week with our public market customers. Demand for project bonds has not really been affected by the coronavirus shock. I do not see liquidity concerns on the demand side.

We did our portfolio reviews this week. We are very focused on construction risk just because many jurisdictions with coronavirus have ceased construction activity, and so construction delays are being factored into schedules and we are having to figure out how that affects the credit profile of the project, but that is a more tactical consideration than a liquidity issue.

MR. MARTIN: Let me ask Ralph Cho one question, then Max Lipkind and then we will go to Ted Brandt.

Ralph, are you seeing any reluctance by banks to allow further draws on construction debt? Lenders usually want independent engineers to certify that projects remain on schedule for construction.

MR. CHO: Of course. There is heavy scrutiny. Our credit teams have been all over this, scrutinizing what sponsors are drawing down and making sure that the use of proceeds is within the guidelines. We are evaluating our portfolios, especially projects with construction risk and reassessing timing delays, given supply-chain issues due to the coronavirus.

MR. MARTIN: Max Lipkind, the term loan B market is shut. Has anything the Fed has done this week or that is part of the CARES Act that is expected to pass the Senate today likely to unlock the term loan B market?

MR. LIPKIND: It is certainly helpful insofar as it gets the broader risk market functioning. A lot of what the Fed announced yesterday is going to affect the low-investment-grade guy more than the non-investment grade issuer. We are seeing the secondary markets gearing back up a little bit yesterday and a little bit more today, particularly across the more liquid names.

Any and all stimulus will be helpful to our market. A little bit less directly because, from our read of it, it has been more targeted toward investment-grade issuers, but as the markets start to function in a more orderly manner and we see pricing in the secondary levels move up 10 or 15 basis points into a more manageable price range, we will start to see the primary term loan B markets reopen. There is a lot of money on the sidelines that could be put to work.

I think the way I would characterize it is indirectly helpful and we certainly expect to see some of the impact on our markets.

M&A

MR. MARTIN: Let me go to Ted Brandt. How are asset valuations being affected?

MR. BRANDT: It is soon to tell, but let me make just a couple points before diving into specifics.

First, you have to think about the wealth effect. There are very few Americans who are richer at the end of March than they were at the beginning of March. Behavioral economics suggest that wealth perceptions drive consumer spending, which is 70% of our market. Clearly what has just happened with the repricing of the equity and debt markets is going to have at least a short-term effect.

Second, renewable energy is the tip of the spear in the M&A market. For the last number of years, we have had a Pollyanna existence in that equity markets were sky high and did not seem like they could possibly go higher,

The bank market remains open, but spreads on new deals have widened.

so the risk to buyers was on the downside. Fixed-income markets were priced to the point where even junk bond levels were 300 basis points over, and nobody could get any real yield for taking real credit risks.

Renewable energy was performing pretty well and even though the offtake agreements were becoming riskier, our market worked.

What Max Lipkind just said should tell you all you need to know about current conditions in the M&A market. Our buyers are divided between financials and strategics. What we are hearing from the financials is why the hell would anyone buy a 7% to 8% after-tax rate of return when BBB bonds are on offer at something close to that and they are completely liquid.

The renewable energy business, if the coronavirus shutdown lasts for any period of time, is going to have more competition because, for the first time in a number of years, public equity markets look very attractive with the Dow having dipped as much as it has. At the same time, there is a lot of money to be made in fixed-income assets. I think the strategics will still be there, and I really believe that this is a short-term storm that will level out over time, but in a market like this, what sells best is quality cash flow. The price is a function of the effective discount rate on offer.

MR. MARTIN: Does the M&A market continue to function in these circumstances because sellers are desperate for cash or does a widening bid-ask spread mean it shuts down?

MR. BRANDT: That is similar to what Ralph described in the bank markets.

Deals that have already been signed are moving to close. For deals that are near signing, there is a re-trade risk, but people still seem to be talking and trying to work through terms and trying to get there. Anything new is being slow played by the market. We have several clients on the sell side who were ready to launch in March, and we are now talking about May.

The other side is the buy side, and we have never had more phone calls from large, well-capitalized organizations saying, "Now is our time, and we are open for business." There is still plenty of cash equity floating around the market. We are not closing up shop and laying everybody off, but we are nervous that transactions are going to slow. We see it as short-term, but these are really tricky times. In the near term, expect lots of volatility and pauses.

MR. MARTIN: You always have a good sense of the discount rates that winning bidders are using to value deals. Has there been a change in those rates as a result / *continued page 16*

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on filings, see "CFIUS Data" in the December 2019 *NewsWire*. For more information about when filings are mandatory, see "Expanded Reviews of US Inbound Investments" in the February 2020 *NewsWire*.)

The fees will apply to full voluntary filings and range from $0, for transactions where the total consideration paid by the foreign person is under $500,000, up to $300,000 for a filing in a transaction of $750 million or more.

The fee is $7,500 for a transaction that is at least $5 million, but less than $50 million. It is $75,000 for a transaction of $50 million and less than $250 million.

The fees will not apply to short-form declarations, mandatory filings and unilateral reviews initiated by CFIUS. However, they will apply if the transaction is first reported to CFIUS in a short-form declaration, but the committee requests a full filing.

Most foreign buyers bidding to acquire US assets feel disadvantaged if they have to make a CFIUS filing to close a sale for fear that sellers will not accept the contingency. The fees will increase the pressure on counsel to advise that a filing is not necessary.

PUBLIC COMPANY EXECUTIVES can face charges of securities fraud if they make misleading statements about construction delays and cost overruns.

The US Securities and Exchange Commission sued the CEO and an executive vice president of SCANA Corp. and its subsidiary, South Carolina Electric & Gas, in federal district court in February for what it said was a pattern of misleading statements over several years about progress on construction of a nuclear power project in South Carolina that ended up being canceled on account of construction delays and cost overruns.

SCANA began working on adding two nuclear reactors to the existing Virgil C. Summer nuclear plant near Jenkinsville, South Carolina in 2008. SCANA / *continued page 17*

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of coronavirus?

MR. BRANDT: Think of broad M&A shops that do a lot of trading in multiple markets. It is clear that that money seems to be drying up and does not seem to be available into the market. We are representing several very committed ESG-related funds and several strategics in very advanced processes, and they seem to be bidding aggressively and holding their pricing.

My sense is that development capital is probably in question, and people are asking whether they can still raise tax equity. We are still seeing long-term demand from steady equity players for contracted performing wind and solar projects.

MR. MARTIN: People have been talking for several years now about a "wall of money" chasing deals. You called it "satchels of euros." What is it today?

MR. BRANDT: There is still a wall of money, but it is probably not as high. The utilities and global investors still have aggressive goals, are committed to moving forward and see this as a short-term blip. The infrastructure guys and the ESG folks are still very much in the market.

Audience Questions

MR. MARTIN: Let's go to audience questions. Several audience members ask why there is such a clear disconnect between what the tax equity investors are saying and the debt view. Ralph Cho, do you want to try that one?

MR. CHO: If you talk to banks, they are open. They are looking at deals. For new transactions, I think people are going to be scrutinizing the credits a little more and things are taking a bit longer. The bank market is not closed or shut down.

MR. ANDERSON: That is true for tax equity and project bonds as well. The issue is where to price a new transaction with the uncertainty. That is probably true across all of our markets.

MR. MARTIN: The next question is for the tax equity investors. "In light of most shops announcing negative earnings per share of 20% to 60% depending on the shop, how is it possible that we will not have major tax equity contraction?"

MR. HENDERSON: I am not aware that JPMorgan has said anything about its earnings per share and how they will be affected.

MR. CARGAS: Same here.

MR. MARTIN: Next question, for Ralph Cho. "Are banks experiencing any kind of liquidity issues?"

MR. CHO: We have not heard of any. Obviously corporate revolvers are being drawn down. Specifically for our bank, we have had underwritings for which we had gone to market, and lenders that we thought had committed to take part of the deal are backing out. The problem is not yet widespread, but we have had problems where lenders do not close and rescind. That is a problem because we are on the hook.

On top of that, there are indications that there could be a slowdown on repayment. Everyone is very focused on that. So given these issues, I have to imagine that all banks are concerned about their liquidity positions. They are evaluating new deals. They are looking at what monies are expected to come in and what monies are expected to go out. Nobody wants to be in a situation where there is a liquidity crunch at his or her institution.

MR. ANDERSON: We have a $20 billion portfolio with financial institutions, and the view of our financial institutions team is that we feel much better about the banking system and how well capitalized it is now compared to the situation in 2008. The system is much more robust. There is not as much of an asset bubble shock; it is more temporary demand destruction. We are dealing with a different animal than in 2008.

MR. MARTIN: John Anderson, an audience member asks, "Are insurance companies shoring up liquidity to deal with increased death due to COVID-19?"

MR. ANDERSON: Thank you for that question. It is a good one. The death rate from coronavirus may be a 1.5% mortality rate, which is not as stark as, for example, SARS when it spread. From what we see so far, our sense is that we have good liquidity for claims.

MR. MARTIN: Another member of the audience asks, "It sounds like there is liquidity, but it is only for higher quality projects and borrowers. Is the DIP market dead?"

MR. LIPKIND: Clearly the market is gravitating toward the higher quality deals. Some contracted projects will see the pricing reset. At Credit Suisse, we are clearly open for business and have had a ton of investor dialog where at the right pricing and maybe even more importantly, right structures, capital will continue to be available. We are looking to use this dislocation to put money to work.

We have not heard any indication that the market for DIP financings for companies in bankruptcy has closed.

None of us likes to be dealing with those types of situations. They are unfortunate, but DIP financings by banks have historically had extraordinarily high recovery rates. There have not been a ton that have come in front of us in the last few days. These things take time to work through the system.

MR. CHO: Higher risk deals are a function of how badly the borrower needs the money. Unless it needs the money right now, I don't think it makes sense to come to market. There is a real-life example. The Competitive Power Ventures Three Rivers project is a construction deal. It is quasi-merchant in PJM. It is sub-investment grade. The sponsor delayed bringing the deal to market. It is a billion-dollar transaction. You need cooperation for a deal that size from a lot of banks. Pricing today would be a lot wider of what the norm should be. Based on that, I think it is the right call. Just delay until the markets stabilize.

MR. MARTIN: Another question for the tax equity investors. "Has there been any change in appetite for residential versus utility-scale solar? Are you thinking more about risk in residential solar? What effect has this had on pricing?"

MR. CARGAS: We remain interested in residential solar and utility-scale solar and utility-scale wind. I think the driver in residential solar is going to be consumer demand for new installations. We have heard some industry observers say they expect that demand to soften. I am not sure we are hearing that from our sponsors yet, but that is probably more of a driver than availability of tax equity.

MR. HENDERSON: I agree. We are not overly worried that consumer defaults will mount on account of coronavirus if that is the question, particularly given our position in the capital stack. We are as committed to the residential solar market as before.

Government Response

MR. MARTIN: Last question, and this one is from me. Starting with John Anderson and go across the full panel, what issues, if any, are you facing that require a government response?

MR. ANDERSON: None come directly to mind given the long-term funding nature of our business. The issues we see are really for businesses where their revenues are expected to collapse for four or five months. Think about the hospitality industry, and then that ripples into the real estate sector. How does the pain get shared through the system? Getting money into the hands of people who are without work for six months. Issues like that.

MR. MARTIN: Ted Brandt, do you see anything that requires a government response?

MR. BRANDT: I run a small business, and it is a little like owning a baseball team without a season. I am somewhat gratified about this new small business program in the Senate bill that looks like it is going to give firms like */ continued page 18*

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owned two thirds of the plant, and the other third was owned by state-owned utility Santee Cooper.

Construction began in 2013 and was expected to cost $10 billion.

The economics of the project rested in part on qualifying for $1.4 billion in federal production tax credits. Such credits can be claimed under section 45J of the US tax code on up to 6,000 megawatts in new nuclear generating capacity put in service by the end of 2020. The credits run for eight years after a nuclear reactor is first put in service and are $18 per megawatt hour of electricity sold to third parties, but there are caps on how much can be claimed in credits in any year.

The SEC said that false statements about progress on the project helped keep the SCANA stock price higher than it would have been otherwise and helped the company raise $1 billion in the public debt market.

One of the two new reactors was originally supposed to be completed in 2016 and the other by 2019.

Westinghouse, the contractor, revised the schedule in 2015 to push back completion of unit 2 to June 2019 and unit 3 to June 2020, but the SEC said that SCANA senior management knew that the project was substantially behind even this revised schedule.

An internal memorandum written by one of the two executives said Westinghouse "has no credibility for developing a realistic schedule" and SCANA has "no confidence in [its] ability to complete Unit 3 by the end of 2020." The same executive reported factually two days later, during a first-quarter earnings call, on the Westinghouse revisions to the construction schedule, but without expressing his doubts about the schedule, and he later told the Public Service Commission that regulates SDG&E that the revised schedule represents "the best and most definitive forecast of the anticipated costs and construction schedule required to complete this that is available . . . ."

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ours some amount of money on the condition that we continue to employ people. The other thing to mention is the deadlines to finish renewable energy projects have to change.

MR. MARTIN: Max Lipkind, you have already had a government response through the Fed in your segment of the market. Is any further response required?

MR. LIPKIND: Not at the moment. I think the one big difference today verses the 2008 financial crisis is the fact that the banks seem much better capitalized. To the extent businesses have seen their revenues collapse, they clearly could benefit from government intervention.

MR. MARTIN: Ralph Cho, is there anything that requires a government response in the bank market?

MR. CHO: It is basically what Max just said. We need to make sure that the banks maintain sufficient liquidity. So making sure that the funding costs remain reasonable has to be a priority.

MR. MARTIN: Yale Henderson?

MR. HENDERSON: The placed-in-service deadline has to be extended. That is the single biggest issue for the tax equity market.

MR. MARTIN: Instead of requiring the projects be completed within four years, perhaps the Treasury ought to write off 2020 as a dead year?

MR. HENDERSON: Instead of a four-year window, just change one word from four years to five years for 2016 projects. That would be the quickest fix and does not require Congress. All it requires is the IRS to act.

MR. MARTIN: Jack Cargas, you already mentioned the need for guidance on what "continuous efforts" mean. Is there anything else?

MR. CARGAS: It would be good to have that clarity, but to me, that is a detail. All of the things that the CEO panel that you hosted last week said are important. That includes more time to finish construction.

The term loan B market is essentially closed, with some existing paper trading at 76¢ on the dollar.

Force Majeure and Coronavirus

by Sue Wang, in Washington

When times are good, the force majeure clause is a large block of text that many readers are happy to skip. Now that COVID-19 has hit the global economy like a meteor strike, it is time to dig in and understand what force majeure means for each player in an infrastructure project.

What Qualifies

The threshold question is: does the COVID-19 pandemic constitute a force majeure event?

This may seem obvious, but in fact it is not safe to assume that a global pandemic automatically qualifies as a force majeure event. In a thousand contracts, there are a thousand slightly different frameworks for how force majeure works. Anyone can have an opinion on how force majeure *should* work, but the executed definitive agreements for each project govern how force majeure *does* work.

At its core, force majeure has three central elements. First, the event must be unforeseeable. This means that if a contract is entered into after the pandemic was already in progress, COVID-19 should be specifically named in the force majeure clause to indicate an intentional allocation of risk.

Second, the event must be outside the control of the affected party. For COVID-19, this element of force majeure is indisputably clear. It is important to avoid contributing to the event through negligence or misconduct. If a government mandate requires that work crews be reduced by 50% in order to reduce density, and a construction site is shut down for failure to comply with the rule, then the misconduct could negate that party's ability to claim force majeure.

Lastly, force majeure is about the impossibility of performance, not the inconvenience of performance. In the aftermath of Hurricane Harvey, for example, shipping in the Gulf of Mexico came to a standstill, and equipment could not be delivered to projects in Texas and Louisiana. Global shipping costs also increased due to the hurricane's supply disruptions. European or Asian projects could not reasonably declare force majeure for a hurricane that made landfall in the United States. Global price increases, although unforeseeable and outside the control of the parties, are simply commercial risk. */ continued page 20*

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While the statements were factually correct, the SEC says they were misleading.

SCANA retained Bechtel to give an independent assessment later in 2015. Bechtel reported that even under the best-case scenario, unit 2 would be completed sometime between December 2020 and August 2021 and unit 3 would be completed between June 2022 and June 2023.

The two executives gave a more optimistic assessment of the construction schedule when they testified before the PSC without mentioning the Bechtel report.

According to the SEC complaint, SCANA said publicly in October 2015 that it had signed a new agreement with Westinghouse that resolved most of the problems with the project. That agreement moved the completion dates for the new units back by just 60 days.

Westinghouse filed for bankruptcy in March 2017. By then, the cost estimate had increased to $18 billion. SCANA and Santee Cooper spent $9 billion on the project by the time they canceled it at the end of July 2017.

An internal email by a SCANA executive to a colleague said we "got on our jet airplanes and flew around the country showing the same damn construction pictures from different angles and played our fiddles while the whole mf [sic] was going up in flames."

The SEC wants the court to order the company and possibly the executives to pay restitution and civil penalties "in an amount to be determined by the court." It also wants the two executives banned from acting as officers or directors of any companies that issue securities for which SEC filings are required.

LAWSUITS AGAINST INTERNATIONAL DEVELOPMENT BANKS in the US courts face daunting hurdles.

Multilateral lending agencies like the International Finance Corporation and Inter-American Development Bank enjoy immunity from most lawsuits */ continued page 21*

Force majeure

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For COVID-19, a strong force majeure claim should articulate the link between the pandemic and the impossibility of performance: that a government order makes it impossible to carry on with manufacturing or construction work, that permitting approvals have slowed down due to closure of government offices, that equipment has been delayed or that it is no longer possible to continue work while complying with employee health and safety regulations.

These three concepts are the theoretical underpinnings of force majeure, but things get messy when theory meets practice.

A global pandemic does not automatically qualify as a force majeure event.

Since parties often use precedent documents to streamline negotiations, a poorly drafted force majeure clause can get passed down from deal to deal like a defective gene. A poorly drafted version might, for example, simply list "acts of war, severe weather, work stoppages" without specifying that force majeure includes all events that are unforeseeable, outside of the control of the affected party, and prevent the performance of the contract. If that is the case, COVID-19 can only qualify to the extent it can fit into one of the listed categories, such as "work stoppages," "supply disruptions," or "acts of a governmental authority."

Further, some recent contracts have specifically excluded supply-chain issues from the force majeure definition. This was intended to allocate risk for the Trump administration's tariffs on imported solar modules, but the effect can be wider depending on the specific language.

Effects of Force Majeure

Force majeure is an excuse. Specifically, it is an excuse to delay or modify performance.

If a supplier or construction contractor declares a valid force majeure event, then the delivery milestones will be extended without penalty.

If a project owner declares a valid force majeure event under a power purchase agreement, then the project will typically be excused from selling power for the duration of the event. For projects that have not yet commenced commercial operations, the guaranteed milestone dates will usually be extended day-for-day.

There can be a downside to declaring force majeure because many contracts have a termination right for extended force majeure. Depending on whether a termination right arises after 90, 180, 365 or some other number of days, it can be a gamble to declare force majeure in the face of an event as uncertain as the COVID-19 pandemic.

Most contracts have a deadline for declaring force majeure, so it is not always possible to wait and see whether the benefit of excused performance is worth the termination risk. Contracts vary widely in terms of the window for declaring force majeure. Some windows start when a force majeure event actually occurs, while others are triggered by a party's awareness of an impending force majeure event. Some windows last for only 24 hours, while other windows remain open for weeks.

In the absence of certainty, many companies have chosen to send preliminary notices that a force majeure event may occur. This is a good way to maintain transparency while also reserving the right to declare a force majeure event at a later date.

When a project owner receives a force majeure notice from one of its contract counterparties, there are two actions to take immediately.

The first step is to respond to the notice with a reservation-of-rights letter.

The second step is to determine who else needs to know that a force majeure notice has been received. Lenders and investors are almost always on this list, and power purchasers, interconnection providers, construction contractors, equipment suppliers, site owners and governmental authorities may also need to be notified. The timeframe for reporting can be as short as 24 hours, so it is important to think quickly and review all of the relevant contracts for potential knock-on effects.

Material Adverse Change

There is one obligation that is never excused: the payment of money. This is why loan agreements usually do not have force majeure clauses.

In fact, loan agreements have the opposite: borrowers must always repay the loans on schedule, but lenders have material adverse change provisions that allow lenders to stop making disbursements.

The material adverse change provision gives lenders a leverage point to bring the borrower back to the negotiating table. Lenders will want to know how force majeure events might affect the project timeline and economics. Depending on the facts of each project, lenders might agree to extend certain deadlines, or they might require partial prepayments or otherwise change the commercial terms before resuming disbursements.

In most financing documents, an event of force majeure or a material adverse change would not, by itself, trigger an event of default. However, failure to notify the lenders could be a breach of the reporting requirements, which can lead to an event of default. Even in the absence of a clear material adverse change, it is better to keep lenders and investors informed as the COVID-19 situation evolves. Clear and consistent communication is critical to a strong working relationship, and in times of crisis there is simply no replacement for trust. ◎

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under the Foreign Sovereign Immunities Act of 1976 or "FSIA." To succeed in US court, an outside group suing such an agency about a project it financed would have to show that the agency was engaged in a commercial activity and the conduct took place in the United States.

A federal district court in February dismissed a lawsuit brought against the IFC by EarthRights International, a non-governmental organization, that said it was suing on behalf of fishermen in India who were harmed by a coal-fired power plant in Gujarat that the IFC helped finance. The project was completed in 2008.

The group accused the IFC of contributing to local pollution by failing to enforce covenants in its loan documents that the group said would have reduced the harm. The group sued only the IFC and not also the owner of the power plant or any of the other lenders.

The case went earlier to the US Supreme Court after the IFC claimed immunity under the International Organizations Immunities Act of 1945.

The Supreme Court said that statute did not shield the IFC from suit in this case, but that the IFC enjoys the same immunity under FSIA as foreign governments. That immunity is subject to exceptions, including for conduct tied to commercial activities undertaken by such governments. The Supreme Court sent the case back to a federal district court to determine whether the IFC loan was a commercial activity and, if so, whether the conduct about which EarthRights International complained took place in the United States.

The district court said in February that any failure to enforce covenants was conduct in India where the power plant is located and not in the US. The IFC has its headquarters in Washington.

Jeremy Hushon, with Norton Rose Fulbright in Washington, said that since the court decided the conduct */ continued page 23*

Coronavirus: Power Sector Outlook

This was expected to be a peak year in new capacity additions for wind and solar projects before the coronavirus. How has the outlook changed? Is work continuing on projects that are already under construction? Are new projects still able to secure financing? How are utilities faring? What issues are companies facing that will require a government response?

A group of power company CEOs discussed these and other subjects on a well-attended conference call on March 20. The CEOs are Michael Garland, CEO of Pattern Energy, Paul Gaynor, CEO of Longroad Energy, Miguel Prado, CEO of EDP Renewables North America, Jim Torgerson, CEO of Avangrid, a holding company for eight utilities in New England and upstate New York, Guy Vanderhaegen, CEO of Origis Energy, and Tom Werner, chairman and CEO of SunPower Corporation. The moderator is Keith Martin with Norton Rose Fulbright in Washington.

Effect on Revenue

MR. MARTIN: Let's start with how revenue into the power sector is being affected. In 2009, industrial demand for electricity in Europe dropped by around 14% on average. The early data out of Europe suggests the current drop in electricity demand is 15% year over year in Italy, 9% in France, 6% in the UK and 2.5% in Germany.

Jim Torgerson, I imagine that utilities in the US rust belt and in the oil patch will feel the drop most significantly. What are you expecting in New England and upstate New York?

MR. TORGERSON: We have not seen much change yet, but we are expecting a slight decline. With everybody staying at home, the residential load will probably increase a bit. The good news is that all of our utilities have decoupling, so our revenue will remain flat regardless of what happens on load.

MR. MARTIN: Not all states have decoupling. Explain what it is.

MR. TORGERSON: Decoupling means that our revenue gets set based on our rate base. The public utility commissions figure out what revenue we should get in order to reach our allowed return. The revenue stays flat based on that calculation. Managing the operating expense is up to us. If our revenue is higher or lower in any particular year, then there is an adjustment where either we collect more or give back to the customers in the following year. We always get the same amount of revenue.

MR. MARTIN: So there is an automatic adjustment. You do not have to wait for a rate case every two years.

MR. TORGERSON: Correct.

MR. MARTIN: Tom Werner, SunPower makes premium solar panels. Some are manufactured in Malaysia. Malaysia has ordered at least a two-week shutdown of factories. What effect do you expect from coronavirus on your revenue?

MR. WERNER: The situation is dynamic. We produce in Malaysia, the Philippines and China. The shutdown in Malaysia has affected our operation. However, there is work being done to exempt semi-conductor and solar factories so that they can operate at some percentage of capacity. The Philippines similarly has stopped work, but we expect that will clear up in the next few weeks. China has been back on line for more than a month after an initial shutdown there. Things remain fluid. Our hope is that our operations will be back fully on line in due course. The shutdowns are buffered to the extent that we have sufficient inventory to buffer.

MR. MARTIN: Have you had to send force majeure notices to anyone?

MR. WERNER: The answer is complicated because we have suppliers, project finance relationships and customers. For supply, no. We are probably going to have to send some in the other areas.

MR. MARTIN: The rest of you are independent generators. Many of your projects have long-term contracts to supply electricity. I imagine that projects with such contracts are more insulated from the effects on revenue but, Mike Garland, let's start with you. How are independent generators affected on the revenue side?

MR. GARLAND: In a couple of ways. First, about 10% to 15% of our revenues come from electricity sales in the spot market. Those will move up and down with stock market pricing. Second, power contracts have curtailment provisions. However, for the most part, we are not seeing any material changes in our revenues or production levels.

MR. MARTIN: Do you expect that pattern to hold, even if the economic dislocation due to coronavirus stretches into July or August as President Trump suggested it might.

MR. GARLAND: I expect that demand will drop. You hear numbers in Italy of eventual drops in electricity load of as much as 20% to 30%. Similar drops in demand in this country would affect spot prices, and power plants are also more likely to be curtailed. I think it will affect some of our revenues, but not in a huge way, at least not in the short run. If the dislocation lasts six months or more, then we could see a real effect. If things recover fairly quickly, then the effects will be pretty insignificant.

MR. MARTIN: Paul Gaynor, where there is a revenue effect, what causes it?

MR. GAYNOR: In liquid markets, electricity prices fall when demand drops. If you have a project with a significant merchant component in places like ERCOT or PJM, that is probably where you will see the most pain.

MR. MARTIN: Miguel Prado, anything to add on revenue?

The outlook for new wind capacity additions this year remains fluid.

MR. PRADO: We are starting to see prices declining as a result of the decrease in demand, especially in places like ERCOT where a lot of electricity goes to drive oil production. The electricity futures for this summer in ERCOT have already dropped from more than $100 a megawatt hour to close to $60. To the extent projects are selling on a merchant basis into the grid, there may be an impact.

The other way coronavirus can affect revenues is from delays in construction. We are already receiving force majeure notices. Some are on wind projects that we are building this year. Construction delays will delay when revenue starts to be received on these projects.

MR. MARTIN: So two effects on revenue for independent generators. One is the effect on electricity prices for projects that are selling on a merchant basis into organized markets. The other is revenue will not start on schedule because the project is delayed. Mike Garland, what percentage of your revenue is merchant? / continued page 24

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was outside the US, it did not have to reach the question whether a lender may be held liable for failing to monitor and uphold environmental and social standards included in its financing documents. "The court also did not close the door on future lawsuits based on loans made by international organizations from the US to foreign projects," Hushon said. "In considering immunity from suit, the key determination will be whether the core of the lawsuit rests on conduct that occurred in the US."

The case is *Jam v. International Finance Corp.* (For a more detailed discussion about this topic, see "Development Banks: Immunity from Lawsuits" in the June 2019 *NewsWire*.)

THE CAYMAN ISLANDS are the latest tax haven to be added to a European blacklist.

The European Union added them in February.

Being put on the blacklist has a number of consequences. They include increased audit risk for transactions where entities in blacklisted countries are used, inability to deduct payments to such entities and inability to use participation exemptions in European countries to shield earnings passing to European parent companies through entities in such tax havens.

Many US companies have offshore holding companies in the Cayman Islands. Other popular locations for such holding companies are Bermuda, the British Virgin Islands, Holland, Luxembourg, Ireland, Madeira, Switzerland and Singapore.

There are now 12 countries and territories on the EU blacklist: American Samoa, the Cayman Islands, Fiji, Guam, Oman, Palau, Panama, Samoa, Trinidad and Tobago, the US Virgin Islands, Vanuatu and the Seychelles.

PARTNERSHIPS are more likely to be audited by the US tax authorities in the future, but the percentage of partnerships that are audited remains small. / continued page 25

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MR. GARLAND: Ten to 15% on a gross basis.

MR. MARTIN: Paul Gaynor, what percent?

MR. GAYNOR: Probably less than 5%.

MR. MARTIN: Miguel Prado, what percent?

MR. PRADO: Less than 10%.

MR. MARTIN: Guy Vanderhaegen, how is coronavirus affecting revenue for Origis Energy?

MR. VANDERHAEGEN: The impact on our revenues is very limited. More than 95% of our revenues are contracted revenues under long-term power purchase agreements. We have very limited merchant exposure.

Economic Curtailments

MR. MARTIN: Mike Garland, you mentioned that one way revenue might diminish is if the projects are economically curtailed. Are you seeing any economic curtailment where utilities tell you to stop generating because they do not need the electricity?

MR. GARLAND: Not at all. We actually have an interesting situation in Ontario. We were going to shut down one of our plants to do some maintenance and repairs. Ontario required that we not do that. It has in most of the PPAs a provision that allows it to curtail up to a modest amount of electricity without compensation. We have seen that right exercised over the last several years because electricity demand has been less than the supply, and Ontario has even gone so far as to curtail substantially more than the allowed curtailment through reimbursements. But, as of this morning, it had a demand of about 15,000 megawatts and 17,500 megawatts of supply, and there were no curtailments. Ontario has about a 17% reserve margin, which is very nice to have, but so far we have not seen significant curtailment under any of our contracts in the last few weeks.

MR. MARTIN: Is anyone else seeing economic curtailments?

MR. PRADO: The early data does not suggest an increase in curtailments as a result of the social distancing measures that have started this week. But it is important to note that generation from renewable sources across all markets has been low in the last few weeks. For example, in the Bay area, the hours with the largest declines in terms of demand coincided with the solar generation peak. This suggests that we may have economic curtailments in the next weeks if the situation persists.

MR. MARTIN: In California.

MR. GAYNOR: We have seen a little curtailment in Texas, but mainly from transmission outages and not from economics.

MR. MARTIN: The transmission outages are just serendipitous. They have nothing to do with coronavirus, correct?

MR. TORGERSON: They are due to maintenance.

MR. MARTIN: Mike Garland, you said in Ontario that the utilities are not required to compensate the generator for economic curtailment. Is there any place in the US where that is also true?

MR. GARLAND: Not under our contracts. [Laughter] We are not seeing much, and I would just emphasize that in Ontario, it is only a modest amount. Ontario can only curtail a couple hundred hours a year without reimbursement.

MR. MARTIN: What happens in ERCOT or PJM? These are organized markets where some projects sell their power into the market for whatever the spot price is. As demand drops, I imagine it could lead to negative prices. Is anyone seeing negative prices at this point? [Silence]

MR. MARTIN: I will take that as a no.

MR. PRADO: We have not, but the situation is completely different. In ERCOT, we are talking about a renewables penetration of up to 60%. Negative prices have been particularly frequent in the South in the past due to transmission outages. Depending on the demand and on how the price of oil evolves in the future, we may see a lot more economic curtailment. So far, we have not seen it.

MR. MARTIN: Negative prices mean you have to pay the grid to take the electricity. Most of renewables projects selling in organized markets on a merchant basis have a hedge to put a floor under the electricity price, but the more recent hedges do not cover negative prices. What happens in that case? I guess the generator just eats the loss and hopefully the negative prices do not persist.

MR. GARLAND: Correct. You pray a lot.

MR. TORGERSON: That is the hope.

MR. GARLAND: We have one contract with negative pricing protection for the offtake.

Slowdown in Development?

MR. MARTIN: Shifting gears, the economy is contracting across Asia, Europe, the United States and Canada. What effect is this having on the supply of development capital? The answer may be that everyone on this call is pretty well capitalized.

MR. GAYNOR: We are definitely well capitalized, and our expectation is that we will have plenty of capital to get through a long drought cycle. I think the question is what happens to some of the smaller players and, as an industry, is there enough development capital?

My guess is that if this persists, there is probably not enough, which obviously creates some opportunities for everybody.

MR. MARTIN: Opportunities to buy up rights to development assets because the smaller companies do not have the money to move them farther?

MR. GAYNOR: Yes.

MR. GARLAND: I think development work on a lot of projects will be delayed. That means having to manage your development capital differently.

The project finance markets are already starting to soften. Tax equity investors and even a number of bank lenders are starting to talk about "wait and see," "see what the margins look like," "we've seen the spreads blow out, the index come down," which is fairly typical in any period of economic dislocation.

It is hard to tell today how that will affect project development. There are some potential customers for electricity who are pushing us to sign PPAs that are currently under negotiation for fear that the market will move against them on electricity prices. There are others who will want to wait to see where the market settles.

MR. MARTIN: Are others seeing a slowdown in development?

MR. WERNER: Permitting and interconnection have become more challenging. The counterparties are working from home in many cases in very dynamic situations, so that is affecting the pace of work on our projects, for sure.

MR. MARTIN: Bloomberg reported this week that 30 power and energy companies are either drawing down existing loan facilities to ensure they have enough cash or are in talks with lenders about new loans. Do you see a move to build up cash?

MR. TORGERSON: We are looking at expanding our existing loan facilities to make sure we have sufficient liquidity. It is more to meet liquidity requirements that the rating agencies impose than anything else. The commercial paper market pretty much dried up in the last couple weeks. We have been using our $2.5 billion revolving credit facilities and will probably arrange another facility so that we have more liquidity.

MR. GARLAND: We have drawn quite a bit on our liquidity facilities because there was a period where there was some uncertainty about bank liquidity, and we are raising additional capital to build up a lot of cash so that we are in a position to execute on new opportunities.

MR. MARTIN: Guy Vanderhaegen, the Tennessee Valley Authority asked for proposals this week to */ continued page 26*

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The IRS large business and international division said in a "focus guide" put out in February that a goal this year is to "increase the volume of audits for passthrough entities." Only 0.22% of partnership tax returns were audited in fiscal 2018, down from 0.38% the year before. The government's fiscal year runs from October 1 through September 30.

WORTH NOTING.

Warren Buffett said in his annual letter to shareholders of Berkshire Hathaway in late February that the company paid 1 1/2% of *all* corporate income taxes collected by the US government in 2019. It paid $3.6 billion. Total US corporate income tax collections over the same period were $243 billion . . . . US corporations reported total profits in 2019 for book purposes of $12.5 trillion, according to Statista.

— contributed by Keith Martin in Washington

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supply 200 megawatts of renewable energy to start at the end of 2023. Are you seeing any slowdown in RFPs?

MR. VANDERHAEGEN: We have not seen a slowdown in RFPs yet, but we expect it to come. I think utilities have other priorities than launching RFPs in the next couple of weeks. At the same time, some utilities want us to rush to sign PPAs because they fear we might walk from the ongoing discussions. If RFPs are delayed and not canceled, then when the markets resume operating normally, there will be a large increase in the number of RFPs.

MR. MARTIN: So perhaps there will be a surge in the fall.

MR. VANDERHAEGEN: Yes, especially if the construction-start rules for solar projects remain unchanged. There will be a rush to sign PPAs as soon as the markets recover this year and at the beginning of next year.

MR. GAYNOR: The big issue that will affect the pace of signing new contracts is whether something is included in the stimulus packages that are being discussed in Congress similar to what came out of the financial crisis in early 2009. Are there similar provisions, what do those provisions say and, importantly, do they require Treasury guidance to implement, and how long does that take?

If there are very clear and minor tweaks to the existing legislation on PTC and ITC qualification, then that is not likely to require guidance. That would be great and, as Guy Vanderhaegen said, things will pick right back up, but if there is any kind of fog in the air, then that will affect how quickly the industry can get back on its feet.

The most serious effects are being felt by rooftop solar companies.

Force Majeure

MR. MARTIN: I assume almost everyone has received force majeure notices at this point from suppliers. Originally, they came from vendors with Chinese supply chains. Have the notices spread more widely to European and other Asian supply chains?

MR. TORGERSON: Yes. We have had notices not only from solar suppliers, but also from wind suppliers. Even the EPC contractors are starting to notify us because they may not be able to get the people on construction sites.

MR. PRADO: The wind industry supply chains are much closer to markets in Europe and North America, and they are being affected as production and logistics are curtailed.

US projects will have the additional pressure of qualifying for production tax credits, so it is becoming very important to address in a stimulus bill given the delays that we are starting to see. In the case of solar, the market is starting to come back, but in February, capacity utilization rates in China were 60% lower than normal capacity. We do not know yet the full impact related to that, but there will be one.

MR. MARTIN: Most companies have told us they are responding to force majeure notices by simply acknowledging them and reserving their rights. Has anyone on this call taken a different approach?

If not, have you had to inform lenders or contract counterparties of these notices and, if so, how have they responded?

MR. PRADO: We had to inform some of our customers about the force majeure notices from suppliers. They acknowledged receipt of the notices.

MR. MARTIN: So just an acknowledgement. Are any of you experiencing actual delays in equipment deliveries or other supply-chain disruptions? It is one thing to receive a notice. It is another to have an actual delay.

MR. GAYNOR: Not yet.

MR. WERNER: There certainly were actual delays at the beginning in China. Exports of solar panels out of China were at about 60% of normal levels in February. While most of the problems have been sorted out, there was a definite slowdown, not only in February, but also in January.

MR. MARTIN: Is anyone else experiencing actual delays on equipment deliveries?

MR. TORGERSON: Not at this point.

MR. GARLAND: We may be in an unusual position because most of the 10 projects we have under construction or about to start construction have 90% to 95% of the equipment already on site. It is the luck of the draw. The lucky timing on our construction projects means that we do not have any real exposure to supply-chain delays.

MR. VANDERHAEGEN: We have not seen any material delays in the supply of equipment. Everything is more or less as planned.

Construction Delays?

MR. MARTIN: With large parts of the US economy shutting down, are the construction crews still on the sites? Can the material reach the construction sites on the US highways?

MR. WERNER: The logistics for us are still working. The challenge we have, of course, is that California is a huge market and the whole state under a shelter-in-place order. The interpretations of whether or not you can operate vary significantly. New Jersey and New York are in similar positions. The interpretations vary over whether you can work, and there is also the issue of whether the crews feel comfortable working. Things are situational and are evolving quickly. Mostly things are continuing.

MR. GAYNOR: We have six projects with about 1,300 megawatts under construction or about to start construction. There are three solar projects and three wind projects. Knock on wood, but all of our sites are still going more or less full bore. I think the contractors are doing a good job of managing personnel on and off the sites while observing COVID-19 protocols.

As an industry, the big issue is whether job-site shutdowns will be required by state and local governments.

This is where the stimulus discussions in Congress would be really beneficial. If these shutdowns start to happen for COVID-19 reasons, then we are going to need flexibility interpreting deadlines to complete construction to qualify for tax credits.

MR. MARTIN: I know owners like to observe work in progress. How do you manage that with travel increasingly restricted?

MR. GARLAND: Our biggest fear is cross-border shut downs if the states start shutting their borders to people traveling from other states. We have a lot of labor that crosses state lines to get to job sites.

MR. WERNER: As far as tracking construction progress, there has been a massive shift to everything online, including this panel discussion, and that includes tracking projects, permitting, designing projects, collaboration, and so forth. We were already making big investments in digital, and I think that shift has accelerated dramatically.

New Capacity Outlook

MR. MARTIN: Next question. This was expected to be a peak year for new solar and wind capacity additions. How has the outlook changed?

MR. GARLAND: Hopefully the worst that will happen is projects will be delayed. As Paul Gaynor said, we are all actively working to try to create some form of PTC and ITC extension for wind and solar.

In the meantime, we are pushing forward and trying to get our projects completed. As soon as the coronavirus surfaced, we tried to get our projects in a position where it would not have any effect on completing them this year. There will be some projects where the supply-chain logistics and other things, particularly on the solar side, will slow things down, causing construction to spill into future years.

MR. GAYNOR: Depending upon how long this lasts, if you have a project in the chute and you are working toward a closing, like in the next month, my guess is that those deals will get done. There may be a change in pricing or fees, but my expectation is that things will hold together so long as there are no significant projected delays in construction.

It is a total toss up whether projects that are expected to enter the financing market in the second half of 2020 will get done. As I already said, it will come down to whether Congress steps in to help and how much clarity there is about how the relief provisions work.

MR. MARTIN: A toss up because everything is back loaded, pushed into the last half of the year, or because of the uncertainty whether you will be able to meet deadlines at that point?

MR. GAYNOR: Uncertainty.

MR. MARTIN: Miguel Prado, how has the outlook changed?

MR. PRADO: No changes in the outlook thus far. Capacity additions before the summer are already in the last phases of construction. We have more than 1,000 megawatts under construction. What we may experience is some delays, as Mike Garland said, but the amount of construction activity is huge and, with any luck, it will still be a good year for this sector.

MR. MARTIN: Jim Torgerson, how has the outlook changed?

MR. TORGERSON: I don't think it has yet. A lot of our projects are scheduled for the latter part of the year, so we very well could see some delays in getting them done. Then / *continued page 28*

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it becomes a matter of getting the IRS to extend the deadlines to complete projects to qualify for tax credits.

MR. MARTIN: If there is no IRS relief, then what happens?

MR. TORGERSON: As long as we can show continuous efforts were made to advance the projects, we should still be able to claim PTCs.

MR. MARTIN: That's if construction started because you incurred at least 5% of the project cost before the construction-start deadline. Many smaller developers started based on physical work. They don't have the same option to buy more time.

MR. TORGERSON: We started most of our projects under the 5% test.

MR. MARTIN: Guy Vanderhaegen, has the outlook changed?

MR. VANDERHAEGEN: A lot will depend on what happens in the next couple months. Right now, most projects seem on track, but of course if the situation deteriorates, then there will be delays.

I think you also have to distinguish among the different categories of solar, such as utility-scale, C&I and residential rooftop. The residential market is more exposed to difficulties with consumer markets shutting down, but for utility-scale, if things stay as they are or it does not get too much worse, people should be able to hit the targets.

MR. MARTIN: Tom Werner, how has the outlook changed?

MR. WERNER: It is early, but storm clouds are definitely on the horizon. As for the varying effects on residential, C&I and utility-scale, of course residential is heterogeneous and the impacts will vary by state. California has challenges. For C&I, different customers are responding differently. There are cases where customers have asked for projects to pause. I will say the origination activity in both residential and C&I is still good. As for utility-scale, if something good happens in Congress, it will have a direct impact and could reverse any potential carnage.

MR. MARTIN: How could the origination activity be good if it relies on knocking on customer doors?

MR. WERNER: We have moved a lot of that online. In residential, for example, you can design a solar system by typing in the address. For C&I, many people working under stay-at-home orders still want to get things done. We have daily tracking of indicators of demand. In residential solar, there has been some impact. In commercial, the data are actually quite good.

Availability of Financing

MR. MARTIN: Has there been any change in the availability or cost of financing projects? Let's go across the panel, starting with Mike Garland.

MR. GARLAND: Yes. The base lending rate has come down, but we are seeing some widening of the spreads. The market for the most part is — I will use Paul Gaynor's description — "uncertain" in that we are seeing people starting to back off a little bit in both the tax equity market and the lending market because they are unsure about availability of capital and the pricing. It is more about pricing. A lot of the banks are saying, "It will cost more to go forward with these projects," and then some of them are starting to say, "Maybe the entire market is headed for a slowdown, so I would rather close on some good projects while I can." There is general uncertainty all around.

MR. GAYNOR: Again, I would answer in two parts. For projects that are in the chute and moving toward closing, we are not seeing any impact on pricing. But I agree with Mike Garland that for future projects, I expect credit spreads and fees to widen and increase.

MR. PRADO: What we are seeing right now is an increase in the level of uncertainty, but it is too soon to assess what is the potential impact in the financial markets. We continue to move forward, but always with the caveat from our investors and banks that they are assessing the situation and, if something changes, they will let us know. For the moment, we are not seeing any of our investors back off, but the level of uncertainty has increased.

MR. TORGERSON: We tend to self-finance or use our balance sheet to finance our projects. In cases where we use third-party tax equity for projects, I agree with the others there is growing uncertainty as to the commitments for closings in the last half of the year.

MR. VANDERHAEGEN: I expect the biggest impact to be on the tax equity market. There is greater uncertainty. I expect some tax equity investors to withdraw from the market or for margins to increase.

MR. WERNER: Same comment on tax equity. We expect a flight to quality, but no near-term impact. We are concerned about the back half of the year.

MR. MARTIN: SunPower is partly publicly traded. The rest is owned by Total. What complications, if any, are created by falling share prices? Do they put pressure on debt-equity ratios and net worth requirements under parent guarantees?

MR. WERNER: We are not there yet. The market is green today, which is good, and so we have not had an impact.

MR. MARTIN: Jim Torgerson, have falling share prices had any effect on Avangrid?

MR. TORGERSON: No, not really. They do not affect any of our credit ratios or anything like that, and we are not looking to raise equity.

MR. MARTIN: How have asset valuations been affected? Does the M&A market continue to function in these circumstances because some sellers become desperate for cash or does a widening bid-ask spread mean it shuts down?

MR. GAYNOR: We will know soon.

MR. WERNER: It is a very dynamic situation. There are transactions moving to closing in the next few weeks, so decisions are being made, but we are not able yet to predict where this is going to go.

Government Response

MR. MARTIN: Last question. Starting with Mike Garland, what issues are you facing that will require a government response?

MR. GARLAND: We are looking for a two-year extension of the deadline to complete projects to qualify for federal tax credits as well as for some direct relief on the value of the tax credits, without burdening the institutional tax equity market, by means of rebates or direct pay or some other method.

MR. MARTIN: "Direct pay" is code, I think, for restoring the Treasury cash grant program?

MR. GARLAND: Yes, effectively.

MR. MARTIN: Paul Gaynor, what issues are you facing that require a government response? You have mentioned some already.

MR. GAYNOR: The other thing is some time relief on the need to take delivery of safe harbor equipment within 105 days after payment. We are fine at Longroad, but I think as an industry there are people who are probably going to experience delays in taking equipment for which they paid at the end of 2019 for delivery within 105 days after payment. And then, as Mike Garland said, some other relief around placed-in-service deadlines and propping up the tax equity market by temporarily restoring the cash grant program.

MR. MARTIN: For the audience's benefit, one of the ways to start construction before the deadline to qualify for tax credits was to make a payment just before the deadline and take delivery of equipment within 105 days after. Are you finding that the market is insisting on an actual delivery? The IRS regulations require only that delivery must be reasonably expected within that time period.

MR. GAYNOR: It is enough to take title with that time period, but that is the issue.

MR. MARTIN: Miguel Prado, what requires a government response at this point?

MR. PRADO: I think the areas that Mike Garland and Paul Gaynor raised address most of the concerns in this sector. From our side, it is crucial to address delays to finish construction and an eventual situation of tax equity scarcity. Those are the two things that we need to address. The way that Mike and Paul described it is perfect.

MR. MARTIN: This is a well-coordinated industry. Jim Torgerson, anything requiring a government response?

MR. TORGERSON: It is the same answer.

MR. MARTIN: Guy Vanderhaegen?

MR. VANDERHAEGEN: I agree with what the others have said — measures around addressing delays and then also reintroducing the cash grants. Those measures would help a lot.

MR. MARTIN: Tom Werner?

MR. WERNER: I completely agree. The clarity of voice of solar and wind has never been better. ◎

California Update

by Jim Berger, in Los Angeles

California residents are under a statewide stay-at-home order that is in effect until further notice.

The order makes exceptions for essential businesses. It does not explicitly allow installation of rooftop solar systems and construction of utility-scale power plants, transmission lines and similar projects because it puts in the essential category workers who "maintain" the generation, transmission and distribution of electric power.

However, at least one California industry trade association concluded that these projects could continue, relying partly on federal guidelines that are worded more broadly.

Electricity demand was down approximately 3% to 5% as of March 26, according to the California Independent System Operator, which operates the state electricity grid. Mild weather may be masking larger reductions in demand.

Resource Plan

The state is still moving aggressively to ramp up renewable energy as a percentage of total electricity supply and to reduce greenhouse gas emissions.

California would double its clean energy and storage capacity by 2030 under a model integrated resource plan the California Public Utilities Commission adopted in late March.

The plan is built around a "reference system portfolio", which is an optimal portfolio that the commission expects all retail electricity suppliers in the state to use when filing individual integrated resource plans later this year. The retail electricity suppliers affected are the three big investor-owned utilities, county-level community choice aggregators, electric service providers and electric cooperatives.

The reference system portfolio uses a greenhouse gas emissions target for the electric sector in 2030 of 46 million metric tons and keeps the utilities, CCAs and other retail electricity suppliers on a trajectory to meet California's goal to supply 100% of electricity with zero-carbon resources by 2045.

The plans submitted by retail suppliers must also show how the state could reduce its annual greenhouse gas emissions for the electric sector to 38 million metric tons by 2030 if it decides to adopt the more aggressive goal.

Greenhouse gas emissions in the state were 424 million metric tons in 2017. The 2020 goal of generating 33% of electricity from renewables was reached in 2018.

The California Public Utilities Commission (CPUC) issued the blueprint portfolio in late March as the first step in a two-year review of its goals and how to reach them.

California has a two-year cycle for integrated resource planning. In the first year, the CPUC develops an optimal electric resource portfolio. The portfolio balances many objectives, including achieving the greenhouse gas emissions target for the sector, maintaining reasonable electricity prices for businesses and consumers and ensuring system reliability. In the second year of the two-year cycle, each retail electricity supplier must submit an individual integrated resource plan that the CPUC then considers individually and in the aggregate with other plans.

The 46-million-ton target for greenhouse gas emissions is a major reduction. It is 26% below the actual emissions for the electric sector in 2017 and 56% below the emissions in 2000.

Greenhouse gas emissions targets are now the main driver for new renewables deployment in California.

To achieve these targets, the new resource buildout will require the following additional construction by 2030: nearly 2,800 megawatts of new wind projects in the state, transmission capacity to import another 600 megawatts of wind electricity from nearby states, 11,000 megawatts of new utility-scale solar projects and nearly 8,900 megawatts of battery storage.

This would be an approximately 30% increase in wind capacity, a more than doubling of solar capacity and a tripling of battery storage capacity.

If the CPUC ultimately chooses to reduce annual greenhouse gas emissions to 38 million metric tons by 2030, the buildout will require moderately more solar and battery storage and significantly more wind: nearly 5,300 megawatts of new wind projects in the state, transmission capacity to import another 3,000 megawatts of wind electricity from nearby states, nearly 12,000 megawatts of new utility-scale solar projects and around 9,7000 megawatts of battery storage.

The utility, CCA and other retail supplier integrated resource plans are due by September 1, 2020. From there, the CPUC will combine the individual plans and adopt a preferred system portfolio based on either the 46-million-ton target or the 38-million-ton target for greenhouse gas emissions.

Either way, significant new renewable energy and storage capacity will have to be built. While the utilities have generally been ahead of their renewable portfolio standard targets, the greenhouse gas emissions goals will drive additional construction.

The individual integrated resource plans submitted will be a roadmap for project developers about where to build. The CPUC's order sets out a year-by-year accounting of the new capacity additions it expects for each type of resource: wind, solar and storage.

New transmission development remains an area of significant uncertainty. The CPUC said, "[T]he locations of too much capacity are too uncertain to jump directly to transmission investments at this stage with either of these portfolios."

Another part of the energy industry that was mostly absent from the projections is offshore wind. The CPUC decision treats it as a novelty. The CPUC said it is "keenly interested in the development of offshore wind," but it decided that development was too speculative to include in the model portfolio. It said that it can "incorporate new resources and information as they become available."

Community Solar

California has been requiring solar panels on all new homes since January 1 this year.

The California Energy Commission decided in February that participation in a community solar program initiated by the Sacramento Municipal Utility District is another way to satisfy the requirement for new houses to have solar panels. (For more details about the California rules, see "California Update" in the June 2018 *NewsWire)*.

When the original requirement to install solar panels was published, it contemplated that the solar requirements could be met with a shared power system serving multiple homes.

The California Energy Commission is expected to approve additional community solar programs.

To be approved, a community solar program must satisfy six requirements. They include that the performance of the solar arrays must be the same or better than rooftop solar, the arrays must be dedicated directly to buildings that would otherwise have been required to have rooftop panels, there must be good recordkeeping, and the company running the community solar program must be accountable to everyone who relies on the system for compliance with the solar requirements.

The SMUD program — and other similar programs that are approved in the future — may open the California residential solar market to a new set of developers and investors. The companies who currently install solar systems on houses are generally not the same companies that build community solar projects. ◎

US Export-Import Bank Resurfaces

by Rachel Crouch and Kenneth Hansen, in Washington

The US Export-Import Bank has an updated mandate and a new lease on life.

Ex-Im is the United States' export credit agency. Its objective is to promote American exports by providing loans, guarantees and credit insurance to companies that export goods produced in the United States.

For the past five years, it had been hamstrung — initially by a loss of operating authority and then by the lack of a board quorum, which prevented it from approving financings exceeding $10 million. On December 20 last year, President Trump signed a bill reauthorizing the bank. The board regained a quorum earlier in 2019.

The bill reauthorizing Ex-Im grants it additional authority in several areas — notably, in supporting exports to compete with China and to support renewable energy. It provides for seven years of operating authority and includes a new mechanism for remaining operational in the event of a quorum lapse.

Just a few months into ramping its operations back up after its reauthorization, Ex-Im has been called upon to respond to the COVID-19 crisis by increasing its financing flexibility with the aim of injecting liquidity into the market and supporting US exporters in need of capital.

In late March, Ex-Im's board of directors adopted emergency response measures to provide for a temporary bridge financing program and expansions of its pre-export financing program, supply-chain financing guarantee program and its working capital guarantee program.

Competing with China

Perhaps the most material change to Ex-Im's mandate resulting from its reauthorizing legislation comes in the form of the establishment of a "Program on China and Transformational Exports" that will be targeted to be at least $27 billion, or 20% of Ex-Im's total financing authority.

Under this program, Ex-Im is mandated to extend credit at rates and on other terms that are, to the extent practicable, competitive with the rates and terms offered by China's state-owned banks. The aim is to neutralize export subsidies for competing goods and services financed by official export credit, tied aid or blended finance provided by China. It is also to support exports in certain strategic categories, including artificial intelligence, biotechnology, biomedical sciences, quantum computing, renewable energy, semiconductors, wireless technology, fintech, water treatment and sanitation, and high-performance computing.

This program was motivated by a concern that China's concessional export financing has placed Chinese exports at an unfair advantage by providing export support outside the terms of the OECD's "Arrangement on Officially Supported Export Credits," which aims to foster a level playing field in order to encourage competition among exporters based on quality and prices of goods and services exported rather than on the most favorable officially supported financing terms.

By establishing the Program on China and Transformational Exports, the reauthorization legislation permits Ex-Im to undertake financings outside the OECD terms for projects falling into the categories described above — for example, by allowing for longer tenors or lower interest rates than would otherwise be permitted.

Focus on Renewables

In addition to the support for renewables-related exports in the strategic contexts described above, the reauthorizing legislation mandates Ex-Im to support exports related to renewable energy, energy efficiency, electric vehicles, electric vehicle batteries and electric vehicle charging infrastructure, and energy storage. In contrast to the previous version of Ex-Im's governing statute, which simply instructed Ex-Im to promote exports related to

	FY 2017 Actual	FY 2018 Actual	FY 2019 Actual	FY 2020 Target	FY 2021 Target	FY 2022 Target
Value of medium- to long-term financings	$172.1 million	$292.7 million	$5.3 billion	$12 billion	$17 billion	$18 billion

Source: EXIM Annual Performance Plan, FY 2021 renewables, the reauthorization legislation sets a goal of committing at least 5% of its annual financing authority (or $6.75 billion) to this purpose.

Funding Surge

Although Ex-Im's statutory financing authority remains the same as it was for the four years preceding its reauthorization, a big increase is expected in the funds it makes available.

US Ex-Im will help exporters in need of capital weather the coronavirus crisis.

Between July 2015 through May 2019, Ex-Im's board of directors lacked a quorum, which meant it was unable to approve large-scale financings, so its activity was insignificant in the international project finance market.

In financial year 2019, when it finally regained a quorum, it authorized $5.3 billion in medium- and long-term financings. That amount is expected to more than double this year. The table summarizes Ex-Im's actual and target financing amounts during the period from 2017 through 2022:

Even before Ex-Im lost full lending authority, and even at a time when Ex-Im's lending activity had increased in the wake of the 2008 recession, Ex-Im's support per unit of GDP was among the lowest in the world for government export credit agencies. One of Ex-Im's stated goals for financial year 2021 is to increase its market share vis a vis other export credit agencies.

Ex-Im's reauthorizing legislation provides the bank additional stability and a longer authorization period than ever before.

In recent years, Ex-Im was not a player in large-scale project finance transactions. During four years, it lacked the board quorum necessary to approve large transactions, and for several months in both 2015 and 2019, it lacked legislative authorization to operate at all.

As a result, project developers and financiers might be excused for viewing its revival with skepticism. However, by making it easier to maintain or re-establish a quorum even in the absence of appointment of new board members, and by granting the bank an unprecedented authorized term of seven years, Congress gave the international project finance community reason to consider Ex-Im a reliable option for supporting eligible financings.

If Ex-Im lacks sufficient directors to reach a quorum, its board cannot authorize financing transactions of more than $10 million. For several years, Republicans opposed to what they saw as "crony capitalism" practiced by the bank declined to confirm any nominees to Ex-Im's board, hobbling the institution. In May of last year, the Senate confirmed three nominees, including the current president and chairman.

The Ex-Im reauthorization legislation provides that if there are not enough directors to constitute a quorum for a period of 120 days during any presidential term, then a temporary board will be constituted with the US Trade Representative, the Treasury secretary, the Commerce secretary and the existing Ex-Im directors as members.

As a result, approvals of financings will not face as great a risk of being delayed indefinitely. Still, the risk of having a financing determination put on hold for 120 days represents a potential material downside of pursuing Ex-Im financing, so developers and co-financiers should keep an eye on the status of Ex-Im's board composition to evaluate whether this risk is present. The board has five director seats and a requires three directors for a quorum. The board is currently composed of three Ex-Im directors, together with the US Trade Representative and the Commerce secretary, who serve as ex-officio, non-voting members. Additional Ex-Im directors have been nominated and decisions on their nominations are pending on the Senate's executive calendar. The Senate is in recess until April 20.

Ex-Im is authorized to operate through 2026. The length of this term in and of itself is a victory for supporters of Ex-Im and a boon for those who seek to take */ continued page 34*

Ex-Im

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advantage of American export credit agency financing. Also critical is the fact that this term removes debate over authorization from the presidential election cycle; previous reauthorizations were often on cycles of four or five years.

Financing for US Projects

A senior Ex-Im official said recently that Ex-Im's legal shop has signed off on the view that Ex-Im is authorized to provide financing for the construction of projects located in the US that are dedicated to facilitating US exports.

This approach represents an important shift in Ex-Im's approach to financing and opens the door to a number of borrowers that may not have considered pursuing export credit agency financing before.

Ex-Im has not yet received any applications for such a financing, but it has indicated its openness to providing such support.

Coronavirus Response

In response to the COVID-19 crisis, Ex-Im has indicated its resolve to meet the moment by increasing its flexibility and has approved several temporary measures to provide relief and liquidity for its clients.

One is bridge financing. In response to the lack of liquidity in the market, Ex-Im has established a temporary program to provide bridge financing to foreign customers of US exporters.

Unlike typical Ex-Im Bank loans, for which a non-refundable exposure fee must be paid up front, that fee will be refundable for the unused portion of the original term of the loan if the borrower can refinance the loan from other sources. Bridge financings will have one-year terms, which will be subject to extension at the borrower's option, absent a default.

Another COVID-19 measure is pre-delivery and pre-export financing. Ex-Im will provide a temporary expansion to its pre-delivery and pre-export financing program to allow short-term loans or loan guarantees for exports still in the manufacturing stage, regardless of whether Ex-Im is providing long-term financing to the buyer of such exports. Previously, Ex-Im only provided financing to exporters still in the manufacturing stage as a component of its medium- or long-term financing for those clients.

Another temporary measure is supply-chain financing. In a supply-chain financing — also called "reverse factoring" — a lender purchases a receivable held by a supplier at a discount, providing immediate liquidity to that supplier, and a buyer pays the lender at a later date.

Ex-Im's supply-chain financing guarantee program covers 90% of an exporter's liability to a bank lender. It has not been very popular to date because of several restrictive terms, including a requirement that 50% of suppliers must be small businesses, a requirement that US exports be sold directly to a foreign buyer (rather than to foreign affiliates of US exporters as an interim step, as is common), and a 50% US content minimum. Ex-Im will temporarily eliminate the 50% small business target and be willing to provide financing for sales to foreign affiliates of US companies. Ex-Im is also evaluating lender requests that it increase its guarantee from 90% to 100%.

The final temporary COVID-19 measure is working capital financing. Ex-Im provides guarantees of 90% of the principal of certain working capital loans from commercial lenders to US exporters. This program is mostly targeted at small and medium-sized businesses and largely carried out through commercial banks with delegated authority to close loan facilities of up to $10 million (depending on the lender) without prior Ex-Im consent. Lending commitments are determined by a borrowing base of export-related inventory.

Ex-Im will temporarily expand the definition of eligible inventory to include all inventory that

> The bank is also trying to extend credit on terms that compete with Chinese state-owned banks.

could potentially be exported, rather than just that inventory actually earmarked for export. Ex-Im is also working to expedite implementation of a revised working capital fee structure. As with its supply-chain guarantee program, Ex-Im is considering temporarily increasing the guarantee it offers from 90% to 100%.

Each of these temporary programs will be available for one year, beginning on May 1.

Ex-Im has also stressed its intention to work on customized solutions with borrowers to meet the challenges arising from the present crisis.

During the meeting in which the Ex-Im's board authorized these changes, US Trade Representative Robert Lighthizer, an ex-officio member of the Ex-Im board, made it clear that "our mission is to get deals done," stating that Ex-Im has arguably "never been more important than it is now."

Remaining Hurdles

Although it is loosening a number of restrictions in the face of the COVID-19 crisis, Ex-Im remains more burdened by restrictive policies than most other government export credit agencies. Unlike other export credit agencies, Ex-Im limits its loans to the amount of US content and requires financed goods to be shipped on US-flag vessels.

Under the US content requirement, to qualify for Ex-Im support, goods and services must be have US content or be shipped from the United States. Items not produced in or shipped from the United States may be part of a project supported by Ex-Im, but will not be eligible for Ex-Im financing.

Ex-Im can support the lesser of 85% of the net costs for a transaction (i.e., total costs minus the cost of ineligible foreign content and local costs of a project) and 100% of US content.

In addition, it can also finance local project costs in the receiving country in an amount up to 30% of the financed US content.

Other countries' export credit agencies have materially relaxed their content policies in recent years. Ex-Im's 2012 reauthorization legislation called on Ex-Im to conduct a review of its domestic content policy, but no changes have been made in recent years. There have been calls on Ex-Im to reevaluate its US content policies.

These policies may make Ex-Im financing less attractive for a number of project developers. In the case of renewable energy projects, for example, the vast majority of components are not produced in the United States. As a result, this policy risks undermining Ex-Im's new objective of designating at least 5% of its budget to supporting renewables.

Ex-Im has its work cut out for it as it rebuilds after a long hiatus from the project finance market.

It will need to rebuild connections and trust. The relative stability and relatively long time horizon provided by its reauthorizing legislation should help borrowers and financiers to get comfortable involving Ex-Im in transactions. During its years wandering in the wilderness, Ex-Im lost senior staff and expertise. The promise of working for an institution assured to remain authorized to approve transactions and to operate for more than a few months or years should attract talent, but it will take time to rebuild capacity.

However, as financing from private sources dries up for some in the midst of the COVID-19 crisis, Ex-Im may become a relatively more important player than Congress could have imagined when it reauthorized the bank last year. As it works to fulfill its mission in the face of the crisis, it may reveal itself, in its new incarnation, to be an institution that is not only more stable and reliable but also more flexible. ◎

US Solar Market Snapshot

Two solar chief financial officers, one solar company co-CEO and one managing director from a private equity fund that is investing heavily in solar talked at the annual Solar Energy Industries Association finance conference in New York in late February about current issues in the US solar market.

The panelists are Pete Keel, CFO of Longroad Energy, Benoit Allehaut, managing director for clean energy infrastructure at Capital Dynamics, Dan Dobbs, CFO of Standard Solar, and Laura Stern, co-CEO of Nautilus Solar. The moderator is Keith Martin with Norton Rose Fulbright in Washington.

Coronavirus

MR. MARTIN: How is coronavirus affecting your companies?

MR. KEEL: Our investors are in New Zealand, and we have a board meeting scheduled there in 10 days. We are having second thoughts about whether we ought to make that trip.

MR. MARTIN: It is not that you might catch the virus there. It is that you might be quarantined on the way back?

MR: KEEL: That is my fear.

MR. ALLEHAUT: And you are afraid of being quarantined in New Zealand? [Laughter]

MR. KEEL: I am afraid of what my wife and children will say if I am quarantined there. And then of course, supply chain is a concern. We do not have any issues that are acute, but it is certainly something that we are monitoring.

MR. MARTIN: Have you received any force majeure notices from suppliers?

MR. KEEL: We have.

MR. MARTIN: Wind, solar? Are the suppliers Chinese?

MR: KEEL: I probably should not identify them. We do not have any solar panels coming from Chinese suppliers. We think it is more of a -— what's the term — CYA type of notice. Our understanding is that we will still be okay.

MR. MARTIN: How have you responded?

MR. KEEL: We acknowledged the notice, but we are trying to understand what is going on and thinking through how the project will be affected if there is a delay.

MR. MARTIN: To be clear, these are non-Chinese suppliers who have sent force majeure notices?

MR. KEEL: Non-Chinese suppliers, yes, but their concern has to do with a Chinese supply chain.

MR: MARTIN: Benoit Allehaut, how has your company been affected by coronavirus?

MR. ALLEHAUT: I just signed a letter responding to a force majeure notice. It is pretty small over the total portfolio, but we are seeing some supply chain issues.

MR. MARTIN: Is the force majeure notice from a non-Chinese supplier?

MR. ALLEHAUT: No, a Chinese supplier.

MR. MARTIN: How did you respond?

MR. ALLEHAUT: Same as Pete Keel.

MR. MARTIN: You just acknowledged receipt?

MR. ALLEHAUT: And reserved our rights.

MR. MARTIN: Dan Dobbs?

MR. DOBBS: We have not received a force majeure notice yet. However, we have received word that some equipment for an energy storage project will be delayed coming out of China. There has not been a formal notice yet, but we anticipate one shortly.

MR. MARTIN: Laura Stern?

MS. STERN: We have not been affected by it in terms of our equipment supplies. We safe harbored virtually all of our panels and inverters and had orders in a long time ago for the 2020 pipeline. Nothing that has been safe harbored is affected by any shipment delays.

MR. MARTIN: Pete Keel, this is expected to be a crushing year in terms of new capacity additions. Are you seeing shortages of equipment, human resources or anything else at this point?

MR: KEEL: Wind projects that want to qualify for tax credits at the full rate must be completed by the end of this year. The equivalent deadline for solar is the end of 2023. The one place where supply is tight is EPC contractors. EPC prices are flat to up.

MR. MARTIN: That is to erect wind turbines? What about solar?

MR: KEEL: It is solar EPC contractors where we are seeing upward pressure on pricing.

MR. MARTIN: Benoit Allehaut, shortages?

MR. ALLEHAUT: I will echo what Pete said again. We are seeing some tightness in the EPC market. The United States has a labor shortage, and that is a real problem. Our approach to answer this is scale. We are bundling gigawatts of projects to get better pricing from contractors.

MR. MARTIN: Dan Dobbs?

MR. DOBBS: We are not seeing any constraints at the moment.

MR. MARTIN: Laura Stern?

MS. STERN: We are not either.

MR. MARTIN: Moving to another timely topic, the Dow was down 345 points at 1:25 this afternoon on top of drops of about 1,000 points over the last two days. Axios reported on Friday that many companies are behaving as if we are already in a recession in the sense that they are cutting back and conserving cash. Do you agree?

MR: KEEL: We have not seen any effect from falling stock prices.

MR. MARTIN: The exact quote is, "Companies are behaving like it is a recession. They are being unusually frugal, holding back on issuing new debt and pumping their balance sheets with cash."

MR. ALLEHAUT: How this industry operates is not particularly correlated with the stock market. What I am more interested in is the 10-year treasury is at a 60-year low. The low cost of money is extraordinarily beneficial to the industry.

MR. MARTIN: Dan Dobbs?

MR. DOBBS: No impact on how we are running our business.

MR. MARTIN: Laura Stern?

MS. STERN: No impact.

IRRs are higher for solar projects than for wind because they take less capital to develop.

Solar + Storage

MR. MARTIN: Next topic. What percentage of solar projects today are being bid with batteries?

MR. ALLEHAUT: We have five projects under construction that are solar plus storage. It is more and more rare to have solar without storage in the western United States. We are moving to renewable energy 2.0. 1.0 was unit contingent, and 2.0 is better dispatch.

MR. MARTIN: Does anyone have a percentage for me? 50%? 60%? Benoit, you say it is more common to pair solar with storage in the west than in the east.

MR. ALLEHAUT: Storage does not really make sense when you get to the northeast. The economics do not support it, but in California they do.

MR. MARTIN: Any percentages?

MR. ALLEHAUT: Maybe one in 10.

MR. MARTIN: That's nationwide?

MR. ALLEHAUT: Nationwide.

MR. MARTIN: What part of the country are you focused on? A group of wind CEOs told us a few weeks ago that 50% of the proposed new projects that they are bidding today for power contracts include storage.

MR. ALLEHAUT: That is surprising.

MR. MARTIN: When you do add a battery, how much does it increase the electricity price?

MS. STERN: It can't because our offtakers will not pay more for storage. If it will increase the power price, it is not viable unless there is an adder or some kind of local incentive.

MR. MARTIN: Does everyone agree?

MR. ALLEHAUT: It is an extremely complicated question. Some people say storage is inexpensive, but the size of the battery is nothing versus the size of the project. We bought the Eland project from 8minute Solar Energy. The price is public. It is a 700-megawatt dc solar project, with a 1,200-megawatt-hour battery. The battery flattens the output curve tremendously and allows us to offer an extremely competitive price for the Los Angeles Department of Water and Power.

MR. MARTIN: Xcel held an auction a couple of years ago. Many solar projects bid with batteries and the price was $7 a megawatt hour higher for electricity from a solar-plus-storage project than from a plain solar project. Yet, Laura Stern, you are saying that adding a battery does not increase the price for electricity in the distributed market and, Benoit Allehaut, if I understand correctly what you said, the battery helps to / continued page 38

Solar

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smooth electricity deliveries in the utility-scale market without increasing the price.

MR. ALLEHAUT: The way to look at it is from the perspective of the customer. Not every block has the same price. If you look at the price of power at 12 p.m. in California, it is close to zero. If you are able to move that block to 7 p.m., the price is $70. The reality from a customer perspective is you will pay based on the profile of the dispatch.

Markets with low barriers to entry are more likely to see degradation in asset value.

MR. MARTIN: The battery gives the supplier more tools to shift the time of day during which it is offering the electricity. It can earn more revenue from doing so.

How much does the cost of a project increase if you add a battery? Maybe that is also too simple a question?

MR. KEEL: That is complicated. Again, we could see batteries in the $100 million range for a $300 million solar project.

MR. MARTIN: So it can add 25% to the project cost.

How much would you expect the revenue to increase as a consequence of having a battery?

MR. KEEL: The additional capital cost has to be recovered, right? Benoit and I were talking earlier about what adding a battery does to the cost of capital. I think that is an interesting question. Is the capital more or less expensive for the battery versus a solar project without a battery?

MR. MARTIN: What is the answer? That's not the question I asked but having posed it . . . [Laughter]

MR. KEEL: We are sellers. I am just as curious what the answer is.

MR. ALLEHAUT: I think that batteries are becoming mainstream quickly. I remember investors in straight solar projects were worried in the early days about panel performance and they got comfortable quickly. Battery technology is evolving rapidly. I could go geek on everybody and talk about liquid cooled batteries. These are really, really sturdy systems for the simple reason that they piggyback on the retooling of the auto industry supply chain . . . .

MR. MARTIN: Before going geek on us, how much does the revenue increase when a battery is added to a solar project? By what percentage?

MR. ALLEHAUT: The problem with that question is you need more factors. What is the size of the storage versus solar or wind and in which market? If you take California, utilities like the resource adequacy component of the battery. You need a couple of associates with really good quantitative degrees to do the calculation.

MR. MARTIN: Is there a range?

MR. ALLEHAUT: You're not going to quote me on that. [Laughter]

MR. MARTIN: This session is being recorded. [Laughter] Dan Dobbs, anything to add?

MR. DOBBS: To Laura's point earlier, a simple answer is it increases the revenue of the project commensurate with the increase in costs because the project basically has to pencil to zero.

Trump Effects

MR. MARTIN: Next topic. This is an industry that depends heavily on favorable public policy to function. What happens if Trump is re-elected? What difference will it make, if any?

MR. ALLEHAUT: I have been in the renewable industry for a long enough time to have seen how it fares under both Republican and Democratic administrations. My favorite statistics are the percentages of wind and solar projects in Republican Congressional districts. The reality is that the center of the country, where there is land and our projects are located, is generally red, not blue. The Senate, which is under Republican control currently, has a staunch supporter of renewable energy in Senator Grassley from Iowa. He chairs the Senate tax-writing committee. It is fine to focus on the executive branch, but the legislature is really behind the industry.

MR. MARTIN: You think the industry is in pretty good shape no matter who sits in the White House. Are there other views?

MS. STERN: In the community solar and distributed solar markets, we are much more affected by state and local policies than we are by federal policies. While the investment tax credit and lots of other federal policies are incredibly important, our day-to-day activities and our market growth potential lies at the state and local level.

MR. MARTIN: Next question. The solar industry came within a hair's breadth of extending the 30% investment tax credit at the end of last year. How important is it to get that extension?

MR. ALLEHAUT: I think at this point in the renewable energy market, tax credits are a perverse incentive. When we see wind projects selling electricity for prices per megawatt hour in the single digits or low teens, it is frankly ridiculous. The value of the commodity offered is higher than what the market is paying. What will happen when the tax incentives disappear is the price will adjust to the unsubsidized level. The tax incentives are simply passed on to the customer in the form of a lower power price.

MR. MARTIN: You think the market will adjust to whatever the reality is, but you are competing with other sources of supply. Does that make a difference?

MR. ALLEHAUT: Fundamentally you are looking at unsubsidized solar or wind versus gas, and in most markets, the reality is that renewable energy generation is able to compete effectively today without the subsidy.

MR. MARTIN: Are there other views about the tax credit extension?

MR: KEEL: We would always rather be more competitive than less competitive. From that standpoint, it is very important not to lose ground. We have seen this story before. The tax credits have lapsed periodically in the past, and then there is a painful period when new capacity additions plummet while power buyers wait to see whether they can get a better price if the tax credits come back. Uncertainty is not good for business. There is still plenty of runway with the phase-out schedules and four-year window today, but it may not feel as good a year from now.

MR. MARTIN: Any other views on the tax credit extension?

MS. STERN: I would like to think that it is a bridge to a more long-term, sustainable carbon policy.

Dealing With Tariffs

MR. MARTIN: Next topic. How are you dealing with unpredictable import tariffs?

MR. ALLEHAUT: I will echo what Pete just said. The unpredictability is destabilizing. We are big buyers of First Solar panels, but the reality is there are not enough First Solar panels and not enough US-made panels in general to supply the market. The tariff on solar panels adds to cost. It squeezes margins. We all have to plan three or four years in advance of deployment. Unpredictable tariffs are the area that worries me the most because they are a tax that will not have been taken into account when we committed to a price at which we are prepared to supply electricity.

MR. MARTIN: First Solar panels are exempted from the US import tariff. What special measures are any of you taking to deal with unpredictable tariffs?

MR. ALLEHAUT: We buy early.

MS. STERN: I also think that the tariffs have put a lot of pressure on the availability and pricing of bi-facial panels.

MR. MARTIN: The exemption from tariffs on bi-facial panels is almost certain to go away within 60 days. What happens then?

MS. STERN: Never say never. [Laughter]

MR. MARTIN: Anyone else have any special measures that he or she takes?

MR. KEEL: For us it was to buy First Solar panels, so we developed a relationship with First Solar. We are one of its largest customers. We are very concerned about tariffs for the reason that Benoit said. That is what we have done about them.

Minimum Offer Price

MR. MARTIN: Next question. The Federal Energy Regulatory Commission has endorsed a minimum offer price for renewable and nuclear power projects bidding to supply capacity in PJM and the New York ISO. How big a deal is this and, if it is a big deal, why?

MR. KEEL: It is a huge deal and a big problem. Solar projects in PJM count either on renewable energy credits – RECs — or a capacity price. Most solar developers were counting on capacity until these rules came out. FERC has really upset the Virginia market in particular. Hopefully, the problem will get fixed.

MR. DOBBS: It has had less of an impact on C&I solar projects because they are competing against retail electricity suppliers. However, it has a serious effect on co-located solar and storage projects. I think that we will suppress / continued page 40

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the development of co-located storage because there we would be looking through demand-response registration or other means to participate in the wholesale market.

MR. MARTIN: What percentage of revenue could be adversely affected? How much are capacity payments as a percentage of total revenue?

MR. DOBBS: Hard to say. I am not sure because we have not taken capacity payments yet on the solar side since we are retail suppliers.

Equity investors are relying on post-PPA merchant revenue to get back their invested capital.

MR. ALLEHAUT: It has not been large. The bigger picture is regulatory intervention. Is this the first domino that will be followed by other dominos? Why intervene in a functioning market? We know why the administration wants to do so, but coal plants are still retiring left and right. The intervention is not changing anything when it comes to coal. I just read this morning about a state that is thinking about leaving PJM. That is the law of unintended consequences.

MR. MARTIN: Four states are reportedly thinking about dropping out of ISOs in response to the minimum-offer-price rule.

Solar Profitability

MR. MARTIN: Next question to you, Benoit. Himanshu Saxena, CEO of Starwood Energy, said a couple of times last year that he was thinking of having t-shirts printed that say, "Who needs profits when you have solar?" You manage an investment fund. You have a choice of investing in anything you want. You are putting a lot of money into solar. Do you agree with what Himanshu wants on his t-shirt and, if so, why are you putting so much money into solar?

MR. ALLEHAUT: I think what he said was fantastic because it calls attention to an important point. In the typical solar project with a 15-year contract to sell electricity, the tax equity gets paid back first, then the back-levered debt, and then the cash equity, in that order. By the end of the 15-year PPA, the cash equity has gotten maybe 30% of its money back. In reality, the cash equity is a merchant investor.

We have refused to play that market. If you look across our portfolio, all of our projects have contracted returns during the PPA term. That is important for us because we are fiduciary investors. We represent teachers' retirement funds, and we do not want to gamble on merchant curves. It is important to realize that, when people originate projects, if all the value is based on a hypothetical merchant curve, it creates a lot of risk for the cash investor.

MR. MARTIN: You seem to agree with Michael Polsky. He said at the New York REFF conference a couple years ago that unless you get your capital back by the end of the contracted term, you are not going to get it back.

MR. ALLEHAUT: I completely agree with that. The reality is that nobody knows with any degree of certainty what power prices will be after the PPA term. From our perspective, the risk is not only not getting your money back, but also not earning a return on your money.

MR. MARTIN: Pete Keel, you develop both wind and solar. How do the developer returns compare between the two?

MR. KEEL: During the development period, you tend to get higher internal rates of return in solar than in wind because it takes less capital to develop a solar project than a wind project, although that is changing. That said, developers focus less on the IRR than on the multiple of invested capital they will earn. Solar capital is not out for very long. On the other hand, solar margins are very tight. You might try to create a project at a 10% return, but exit at 8% or 9%. There is less margin for error on the solar side than there is with wind.

Discount Rates

MR. MARTIN: At what discount rates are solar assets trading currently?

MR. KEEL: There are two variables: discount rate and assumption about residual value. One bidder might bid a 6% discount rate, but with no residual value. Another person might bid 9%, but assume a 20-year PPA and assign value to another 15-year merchant tail. Where most people appear to be in the current market is to assume a 35-year useful life, and then they flex the back end.

MR. MARTIN: What does it mean to flex the back end?

MR. KEEL: They look at sensitivities. What is the project worth if the merchant electricity prices are the Ventyx forecast plus 10%? What about the Ventyx forecast minus 10%? What is the return for the contracted period without relying on any merchant revenue? It all goes into the mix.

MS. STERN: The yields are often close to the expectations of any individual company's investment committee, by definition. There are probably 10 variables that go into the bid model. It is not just residual value, but also O&M pricing, insurance costs, property tax increases, degradation — all of these factors play into the yield.

MR. MARTIN: Where do you go for your out-year electricity price forecast? Do you take an average of different merchant price curves? Do you inflate current prices by 2%? What do you do?

MR. ALLEHAUT: Since we are mostly looking at retail rates, we typically assume retail rates plus somewhere between 1% to 2% per year.

MR. MARTIN: A lot of people say that in auctions, the winning bidder is the one who mispriced the risk or had too optimistic an out-year electricity price forecast. Given that winning an auction should not be cause for celebration, why would anybody participate in one? [Laughter]

MR. ALLEHAUT: What is interesting is that this industry has become about scale. We work very closely with Tom Buttgenbach at 8minute Solar Energy. The ability of 8minute to source and build projects and optimize the cost side is second to none. The company will create value through its ability to deliver. If you are able to bundle multiple projects, you will get a better EPC price and realize other economies of scale. The key to creating value in this market is to create a large portfolio. If you do everything small, it is a tough market.

MS. STERN: There is an incredible velocity of project turnover. Winning an auction is really just creating an option value on flipping a project. How many entities that won auctions still own and operate their own assets? It is a very low percentage.

Debt Rates

MR. MARTIN: Next topic. Bankers are say that debt is pricing today at 125 to 137.5 basis points over LIBOR. Has anybody actually seen these rates?

MR. ALLEHAUT: Yes, and I expect that we will do better.

MR. MARTIN: You expect rates to decline further.

MR. ALLEHAUT: I would caution you about use of the word LIBOR, as it is going away.

MR. MARTIN: Anybody else on debt rates?

MS. STERN: I would say no. I would add another 50 basis points.

MR. DOBBS: I agree at our end of the scale.

MR. KEEL: I think the spreads are accurate for the utility-scale market.

MR. MARTIN: ERCOT says that there are 100,000 megawatts of renewables in the pipeline. What does that say for development opportunities in ERCOT?

MR. KEEL: ERCOT has a 75,000-megawatt peak load, so I would say it is a good place to be looking at storage.

MR. ALLEHAUT: One of the lessons learned about renewable energy projects is that the lower the barrier to entry, the more likely you will see a degradation in the final value of your asset. ERCOT is probably the easiest market to get in. A lot of developers are active in that market. The universe of owners is probably smaller and a very discerning group.

MR. MARTIN: Dan Dobbs, Laura Stern, you work on commercial and industrial projects. C&I has always been the next big thing, but it has been challenging because the transaction costs are so high. Each individual power contract is individually negotiated, making diligence expensive. Has it turned a corner, and if so, what has changed?

MR. DOBBS: It remains challenging. We look for portfolios of projects with multiple sites where you can refuse sites after doing the diligence. We are not necessarily committed to doing every building in the portfolio.

MS. STERN: We work almost exclusively in community solar. Such projects have many of the physical characteristics of a utility-scale plant, which makes the due diligence similar to larger projects. The nature of the community solar offtake agreement moves the credit underwriting focus to the entities that are ensuring that the output remains fully / continued page 42

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subscribed. This reduces the need to review each customer's offtake agreement and credit profile. That would make the transaction costs prohibitive.

MR. MARTIN: People often say that community solar is power supply at close to retail rates. How true is that?

MS. STERN: Fairly accurate. The electricity is sold at a discount to retail rates. The price is often indexed to retail rates.

MR. MARTIN: A 15% discount?

MS. STERN: Yes.

MR. DOBBS: Ten to 15%. I think one of the things that makes it a more sustainable business model than rooftop solar is the local utility usually keeps the customers and continues billing them for the electricity.

MR. ALLEHAUT: Community solar has consolidated on the capital side, so Blackstone, for example, has a platform. Blackrock has a platform. We have a platform with Sol Systems. Goldman Sachs has one. These arrangements consolidate on the capital side by allowing portfolios of community solar, C&I and residential rooftop in single financings.

Trends and Challenges

MR. MARTIN: I have two general questions remaining. Let's work across the panel. What are the one or two biggest trends this year in the solar market, starting with Pete Keel?

MR. KEEL: The first is an uptick in community solar activity. The second is growing interest in solar coupled with storage.

MR. ALLEHAUT: More structured offtakes. I think that . . .

MR. MARTIN: What is a structured offtake?

MR. ALLEHAUT: A fixed-volume or full-requirements contract. Another trend is the industry is developing a better understanding of the promise of bi-facial panels.

MR. DOBBS: I agree. We see a lot more community solar growth.

MR. MARTIN: That is despite the fact that only a handful of states have really good community solar programs at this point. [Pause] Dan is nodding yes.

MS. STERN: I agree about community solar, and all of us have to work to open up more states and markets.

MR. MARTIN: Starting with Laura Stern and working back to Pete Keel, what is the greatest challenge this year for your company?

MS. STERN: Tariffs remain a huge challenge for us. Another challenge will be to see how the tax equity market adjusts to the lower investment tax credit for projects that were not safe harbored before December 2019.

MR. DOBBS: Our biggest challenge is the investment tax credit stepping down and managing the use of equipment we purchased in 2019 to start construction of projects by making sure it is properly deployed in individual projects.

MR. ALLEHAUT: Return on human capital.

MR. MARTIN: What does that mean?

MR. ALLEHAUT: That means that we are all really busy, so how do you squeeze more productivity out of the team?

MR. KEEL: Execution. We are trying to push 1,000 megawatts to financial closing this year. We will need good execution across that portfolio.

MR. MARTIN: That's a challenge every year.

MR. KEEL: Ideally, yes. [Laughter]

US Policy Outlook For Renewable Energy

Abby Hopper, CEO of the Solar Energy Industries Association, Tom Kiernan, CEO of the American Wind Energy Association, and Greg Wetstone, CEO of the American Council on Renewable Energy, talked at the annual renewable energy law conference on the University of Texas campus in Austin in late January about the policy outlook in the United States for renewable energy.

The discussion was soon after the US Congress gave wind developers another year to start construction of new wind farms to qualify for federal tax credits, but without extending the deadline to start construction of solar projects. The following is an edited transcript. The moderator is Keith Martin with Norton Rose Fulbright in Washington.

Wind Extension

MR. MARTIN: Abby Hopper, how did wind end up with a tax credit extension at year end and solar did not when solar seemed to have done most of the leg work?

MS. HOPPER: It was a narrow tax extender that only extended things that had either already expired or were expiring. Solar did not fall into that bucket. Wind did. We are only half way through the current Congress. Bills have been introduced in both the House and Senate to extend the solar investment tax credit for five years at 30%. We do not usually give up fights in the middle of the battle.

MR. MARTIN: Is the story true that a tax credit extension for solar was in the bill until the Saturday or Sunday before the bill was enacted?

MS. HOPPER: We understand that we were in the bill even later than that.

MR. MARTIN: Tuesday? The bill passed the House without a tax credit extension for solar on Tuesday the week before Christmas.

MS. HOPPER: Correct.

MR. MARTIN: Can you talk about what time.

MS. HOPPER: Until Monday around 11 p.m.

MR. MARTIN: Tom Kiernan, you take issue with my characterization of how this happened. [Laughter]

MR. KIERNAN: Well, a couple of thoughts. Let me get a running start. [Laughter] As often is the case, I very much agree with Abby and her sense of how things unfold in Washington. This was a situation where a large deal was close to adoption — a solar tax credit extension, a wind extension, a tax credit for standalone storage, more time for offshore wind projects to start construction and tax credits for electric vehicles. A bunch of stuff was in the package until 11 p.m. on Monday night.

The deal then unraveled, and the fallback was not to do a big package, but only to do something small. The Ways and Means Committee had reported a bill earlier out of committee that only dealt with tax credits that had already expired, so they turned to it.

We had made a very strong, diligent and clear case for a wind tax credit extension during the course of 2019. Solar did do a lot of work, but we were up on the Hill as well. We had never said tax credits at 40% of the full rate did much for the market. Our message on the Hill was that to put wind and solar — and ideally other renewables — in some degree of parity, wind needed to be extended at a 60% of the full rate, and that is where things ended up.

MR. MARTIN: The Joint Tax Committee staff appears to have advised that a tax credit at 60% of the full rate for wind is equivalent to a 30% investment tax credit for solar. Is that true?

MR. KIERNAN: That is our rough sense. They are roughly equivalent.

MR. WETSTONE: Can I jump in here?

MR. MARTIN: Please.

MR. WETSTONE: The big picture is there was every reason to believe that the leverage was there to get the more ambitious deal. That's why a lot of people were disappointed at the way things ended because this was an opportunity to make progress on tackling climate change. There was a large and diverse coalition behind the broader package. The package had bi-partisan support. There is momentum to find a way to get those issues taken care of at the next opportunity.

Solar Extension

MR. MARTIN: Abby Hopper, you are still pushing to extend the 30% solar tax credit. How do you answer CEOs who ask what are the odds it will happen this year?

MS. HOPPER: I get that question a lot. My board is meeting this week to talk about our priorities for 2020. I can guess that our priority ultimately — I think we all share this — is a holistic approach to the extensions.

MR. MARTIN: A package covering all the things that Tom and Greg mentioned?

MS. HOPPER: Exactly. Rather than / continued page 44

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one-off technology-specific solutions, a holistic . . . .

MR. MARTIN: You are not going to leave Tom in the dust? [Laughter]

MS. HOPPER: No man. This is the future of how we are going to power our nation, right here in front of you. It is not my proposal versus your proposal. It is a holistic look at how we power our entire economy. It is probably unrealistic to think the full package will move by the end of the year, but it is a framework that we are all getting behind. Of course, we will be opportunistic and try to make progress wherever opportunities arise.

What I say to every CEO who asks me is that I am not in the business of giving odds, but I can tell you of all of the work that we are doing and the conversations that we are having.

Last year, you asked Tom and me whether we were asking Congress to extend the tax credits, and we said no. The conversation has changed so dramatically in Washington. It is not about tax credits. It is about how do we move more vigorously to address the climate crisis that we are facing, and what tools do we have at our disposal. Our conversations in 2019 were about climate change and here is a suite of solutions before you. Use of tax credits to accelerate adoption of renewables has already been established as a construct. We know how production tax credits work. We know how investment tax credits work. And so, while you work on figuring out a holistic approach, at least extend what is working.

Tom and I say all the time that we do not have to innovate our way out of this crisis. Let's use the tools we already have.

MR. MARTIN: Let me come back to Tom and Greg because I want to try harder to get some odds — business people need odds — but, Abby, what were you asking for? Five more years of the solar investment tax credit at the full 30% rate?

MS. HOPPER: That is what is in the bills that were introduced in the House and Senate.

MR. MARTIN: It seems unrealistic that the whole package would clear this year during an election year. However, what if you have a shot at getting an extension of the 30% investment tax credit. Would it be retroactive to the start of 2020?

MS. HOPPER: The ask is still being refined given that we just started 2020, and the tax credit stepped down on January 1 to 26%. We are in deep conversations within our trade association.

MR. MARTIN: Tom Kiernan, if solar gets an extension, will wind be looking for the same 60%?

MR. KIERNAN: Let me back up half a step and I will get to your question. We are starting the year looking very much, as Abby said, for more of a holistic solution. We will be on Capitol Hill talking about Senator Wyden's tech-neutral approach that offers tax credits of varying amounts based on the carbon emissions of the various clean-energy technologies. We will be pushing on that front.

While we are not particularly optimistic about the odds this year for the Wyden approach or other carbon legislation or even a standalone tax extenders bill, this year is really important. As one of my colleagues said, this year is a dress rehearsal. It is a running start. You are going to see a lot of proposals this year as Republicans and Democrats start jockeying for position on what is likely to move next year.

If a tech-neutral bill is not possible and if something on tax credits starts gaining momentum, then yes, we will be in there because we feel strongly about parity. We want a level playing field on the clean energy front going forward. That includes onshore and offshore wind and storage. Maybe we even end up putting wind under the investment tax credit. If not, it would have to be an extension of production tax credits.

MR. MARTIN: Greg Wetstone, do you seeing anything happening on this front in Congress before December? And what odds do you give an extension of these two tax credits?

MR. WETSTONE: The question is whether Congress will take any action on tax matters before year end. It is hard to tell. If a tax bill of any kind starts moving, then I think you will some engagement around clean energy issues. We are particularly focused on energy storage, which we believe, as Abby and Tom said, should have a tax credit even when it is free standing.

We want to get to very high levels of renewable penetration. We need advanced grid technologies like storage to get there.

MR. MARTIN: But is any of this realistic this year?

MR. WETSTONE: It might be.

MR. MARTIN: How do you see it unfolding?

MR. WETSTONE: For example, if there is an opportunity in May around some sort of healthcare extension, we will be looking at that. You said December. That would be the classic scenario for Congress to meet in a lame-duck session after the election to deal with tax extenders. The dynamics in a lame-duck Congress will depend on what happens in the election. If control of either house shifts to the other party, then the party that gained control will want to push everything into the next Congress rather than deal with anything in a lame-duck session.

I think the technology-neutral credit that Tom and Abby mentioned has tremendous advantages. It brings all the technologies together and makes us inherently more united in our advocacy. That's a good thing.

Climate Change

MR. MARTIN: Let me change the topic. Last week was Davos, and it seemed like we reached a tipping point both for the business community and world leaders in terms of agreement about the necessity to act on climate change.

Will that translate into some action among Republicans this year? There seems to be a little panic among House Republicans that the party must move off its position of questioning the science behind climate change.

MR. WETSONE: I think we will see Republicans find something to be for this year to tackle climate change rather than continue to oppose any action.

MR. MARTIN: Let me rephrase the question. I saw a report this morning that Congressional Republicans and even President Trump are now scrambling to acknowledge climate change after years of denying the problem. The question is: has there been a noticeable change in willingness to act?

MS. HOPPER: We have 14 Republican co-sponsors on our House bill to extend the solar ITC by five years.

MR. MARTIN: How many Republicans have co-sponsored the Senate bill?

MS. HOPPER: None.

MR. MARTIN: Trick question.

MS. HOPPER: I knew you knew the answer to that, but in my opinion, it shows – and I think Tom has a similar story – that there are Republicans who understand that it matters in their districts. There are businesses and consumers in their districts who are anxious for more solar.

We have had lots of soft support from Republicans. People are not signing up to co-sponsor, but they were being incredibly helpful behind the scenes in December when we were pushing hard for an extension.

MR. MARTIN: Bob Inglis, who was a very conservative congressman from South Carolina, lost his re-election bid, but he switched on climate change in his last term. He had been denying the need to act. What caused him to switch was his kids said they would not vote for him. [Laughter] Are you sensing a sea-change among Republicans this year in Washington?

MR. KIERNAN: I think the answer is yes. That does not mean that action is imminent. But two years ago, you could not go into a Republican office – I am overstating this—and talk climate change. Now you can go in virtually every office and talk about it, but that does not mean we will have a climate bill this year. Pressure has to keep building. Our political leaders tend to be trailing indicators, not leading indicators, of public opinion. They will follow the public as momentum builds throughout the country.

MS. HOPPER: All of the polling is showing that young Republican voters care about this and are demanding answers. I think what we have heard from elected officials is they see the same polling numbers that we see. They see their constituencies changing over time.

MR. KIERNAN: Will it be a carbon tax? Maybe yes, maybe no. How about a clean energy standard, cap and trade or some other standard? There are many ways of approaching this, and Republicans and Democrats are trying to figure out which of these work for them in the best way. Republicans are putting out a lot of innovation bills. They want to innovate . . .

MR. MARTIN: And plant trees.

MR. KIERNAN: . . . both of which I applaud, but I don't think they will get us where we need to go.

MR. MARTIN: There has been a ground swell of support from Republican business types for a carbon tax with the money returned to the public through a dividend. The suggestion has been made that if Congress were to act on this, it should pass the dividend first and keep fingers crossed that the tax will pass, perhaps by coming up with another word for tax.

Do you see this getting traction in Trump's second term or a Democratic president's first term?

MR. WETSTONE: The proposal has a long list of avid Republican supporters. Unfortunately, it is always the people who have announced they are leaving Congress or who are not currently in office. That has been the pattern. Carbon pricing, however it is implemented, could be really helpful, but in order to get where scientists say we need to be, we will need a mix of approaches. It will be hard to set a carbon price high enough to do by itself what is needed.

Tariffs

MR. MARTIN: Let's switch gears and go back to Abby Hopper. The US International Trade Commission is studying the solar panel import tariffs. I don't know whether the tariffs can be extended legally beyond the initial four years, but */ continued page 46*

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many people think that the rate of reduction will be slowed. Do you see any evidence to counter that fear?

MS. HOPPER: It is an interesting legal question. The tariff statute requires a mid-term review and says that, during the mid-term review, the president cannot make the tariff harsher. We have argued in our briefs that slowing the decline of the tariff is in fact making them harsher.

We have had lots of conversations with the administration about this and will continue to do so. Businesses need certainty. All of our companies have been planning for a four-year step-down. I think it would be fairly catastrophic if it was slowed.

MR. MARTIN: Do you sense there could be an extension of the four-year term?

Before coronavirus, CEOs put cybersecurity and unpredictable tariffs as their top two issues.

MS. HOPPER: The way the statute works, two things could happen. The petitioners can ask for an extension, but they cannot do that until the last nine months before the tariff expires. Separately, the president could ask the International Trade Commission to evaluate whether the tariff should be extended.

MR. MARTIN: The argument that slowing down the rate of reduction would make the tariff harsher is an argument that must be made to an audience of one, right? Trump.

MS. HOPPER: Yes, or perhaps in an appellate court. [Laughter]

MR. MARTIN: Next topic. We saw a phase-one China trade deal. There was an interesting cartoon in the newspaper of a box. Somebody had opened the top, but the box was empty inside except for one insect flying around.

The one thing the phase-one deal did that affects solar potentially is the tariff on Chinese batteries was reduced from 15% to 7 ½%. Are you aware of any other benefits from the phase-one deal?

MR. KIERNAN: No. We need a phase-two deal to get at the significant tariffs that are on wind turbines, wind parts, towers, etcetera. The existing tariffs pose a significant challenge for our industry. Our initial analysis showed that the tariffs have cost tens of thousands of jobs in the wind industry. We are deeply concerned and want a phase two.

MR. WETSTONE: The big problem, as Abby said, is the lack of predictability. Talk about the government picking winners and losers: now you have companies coming forward seeking specific exemptions. And you have the government granting an exemption — for example, for bi-facial solar panels – and then yanking it away within months after companies have started making investments in new manufacturing capacity. This is a very unpredictable framework that makes it tough for long-term investment that is so critical for manufacturing. It is remarkable that we have been able to score the growth rate we have in the face of such uncertainty.

MR. MARTIN: A poll of CEOs in the US in the last couple of days showed most CEOs put cybersecurity as their number one issue and trade uncertainty as the number two issue.

Abby Hopper, you are seeking exemptions for imported solar panels I believe, from Canada and Singapore. On what basis?

MS. HOPPER: I have two ITCs in my life — the International Trade Commission and the investment tax credit. We are asking two things of the ITC. One is that exemption. We think that could have a meaningful impact on US solar adoption rates and the levels of production in the two countries are not so high as some of the other countries who are seeking to increase their tariff rate quotas for imported cells. The second thing we want is no change in the stepdown in the tariff rate.

MR. MARTIN: Meanwhile late in the day on Friday, Trump issued a proclamation slapping 25% import tariffs on products that use steel and 10% tariffs on products that use aluminum because the existing steel and aluminum tariffs are not having their desired effect on the US manufacturing employment base.

Have any of you heard complaints from members about these enhanced steel and aluminum tariffs?

MR. KIERNAN: Steel is a major component in wind towers. The existing steel tariff has affected our industry. We will be very interested in the scope of any new steel tariffs.

MS. HOPPER: The steel tariff has also affected the solar industry. There is steel in the trackers and other components. If you slap on section 201 tariffs and then add section 331 tariffs and then impose section 301 tariffs, it has a pancaking effect. Little changes in each can be important, but the cumulative effect has really been challenging.

Wind Issues

MR. MARTIN: A Wood Mackenzie report out this month found 15,000 megawatts of new wind capacity is likely to be installed this year, but 9,000 megawatts are at risk of spilling over in 2021. What do your own numbers show?

MR. KIERNAN: We are going to be releasing our numbers next week. I will say there was significant spillover from 2019 to 2020 that contributes to the high number for 2020. We expect 15,000 megawatts, if not significantly higher deployment, this year. Yes, there will be some spillover into 2021, but we think we will see a record number of megawatts deployed in 2020, well above 15,000.

MR. MARTIN: I have put on the screen one of two slides that show wind and solar growth. The solar growth curve is as steep as the best wind forecast. However, there are two alternative wind forecasts that show new wind capacity additions slowing slightly after 2020. To what do you attribute that slowdown versus solar?

MR. KIERNAN: There are a couple factors that contribute on the positive side to growth, and then I will comment on the challenging side of your question. With the tax credit extension at year end, we are seeing more likelihood of the bold scenario. The spillover from 2019 to 2020 may even produce a higher number for 2020 than is shown.

We do have some challenges. The major one is transmission and the grid. We are seeing significant grid congestion. Developers can build projects, but not connect them to the grid because there is no room to move the additional electricity and, in other cases, the cost to interconnect is staggering. This has been a front-burner issue for years. We need progress. We are having challenges siting wind farms in different regions of the country. This is creating additional headwinds.

MR. MARTIN: The second chart is now on the screen and shows a drop off in new wind capacity additions after this year. To what do you attribute it?

MR. KIERNAN: The phase out of the wind tax credit. The last five years have been really strong, steady and unprecedented. The wind industry has deployed seven, eight or nine thousand megawatts in each of these last many years.

We have had a lot worse drop offs in the past as the tax credits ran off. The tax credits for newly installed projects will be declining each year after 2020. However, we are optimistic that we will still see significant annual capacity additions going forward.

MR. MARTIN: If there is a distinct tipping point on climate change and people then try to grab every tool they can to promote renewables, we could see these use cases change.

Let me also ask a few other wind questions quickly. One is that it seemed like, in the past year, the Federal Aviation Administration was having more problems with wind towers than ever before. Why?

MR. KIERNAN: I don’t want to overstate this, but the towers are getting taller and the blades are getting longer. A higher percentage of the projects are above that 500-foot level. That then causes a little bit more scrutiny from the FAA.

Obviously we are putting more turbines in the ground. The FAA and Department of Defense, which operates the radars used by military aircraft, are aware of that and we are having an effect on some of the radar, so we are working closely with the FAA and DoD and others to mitigate the effects.

MR. MARTIN: The other big story is that developers say municipalities are making it harder to get permits to move the big blades down the road.

MR. KIERNAN: Yes, the issue is not just permitting, but also finding experienced drivers for the specialized trucks. The blade manufacturers are looking at segmented blades that are in two parts. As with most industries in the clean energy space, we are innovating. We are going to figure out solutions to whatever new problems arise. We are still at an early point in the technology curve.

Offshore Wind Delay

MR. MARTIN: Do all of you share the view that we are not likely to see the hold on offshore wind projects off the Atlantic coast lifted until after the November election?

MR. KIERNAN: The offshore wind industry has extraordinary momentum with 26,000 */ continued page 48*

Policy Outlook

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megawatts of projects in the pipeline. We are looking at 46,000 jobs in the next decade and $70 billion supply chain. Yes, the president has not spoken positively about the wind industry, but the economic and political case is there.

We have had some productive discussions recently with the Department of Interior and the Bureau of Ocean Energy Management. BOEM has suggested to us that it could start moving some of the permits as early as this spring.

MR. MARTIN: Abby, you were head of BOEM. What do you think?

MS. HOPPER: I think elections have consequences. [Laughter]

MR. WETSTONE: It is worth mentioning that there was a big public outreach around the new effort by the Trump administration to streamline application of the National Environmental Policy Act. Here is a situation where the administration was under no legal requirement to halt offshore wind development while it does a cumulative impacts study under NEPA. If the administration is serious about streamlining NEPA, this would seem like a good place to start. It would free up tens of billions of dollars in investment.

The case is there. It may well be that it takes an election.

MR. MARTIN: How significant are the Trump NEPA proposals for renewable energy? Where do you see them going? Tom Kiernan?

MR. KIERNAN: There are areas for improvement on NEPA, but we also have strong concerns about how some of the administration's proposals might negatively affect climate change. My understanding from our attorneys is that the administration probably has the legal authority to move forward with this.

MR. MARTIN: Abby Hopper, are the NEPA changes significant?

MS. HOPPER: I echo what Tom said. There is clearly an opportunity for improvement. I know when I led BOEM and was issuing NEPA documents for offshore wind farms, it was sometimes frustrating even inside the administration to work through all of the NEPA procedures to get to completion.

The biggest issue for developers is lack of predictability about the timeline. Improvements are needed there, particularly for companies that are building on public lands. I also agree with Tom that parts of NEPA are critically important for the environment and should not be undercut.

MOPR

MR. MARTIN: Let's switch gears. Joe Kelleher, who was chairman of the Federal Energy Regulatory Commissioner under President George W. Bush, was called away from our panel at the last moment, so we are going to tackle FERC issues without him. What difference do capacity auctions in places like PJM and ISO New England make for renewable energy producers?

MR. WETSTONE: They are huge. The idea is that you have to have capacity to back up variable generation. However, the auctions can become a vehicle that the regional grid operators can use to penalize states that have established policies that promote renewable energy or arguably internalize the cost of fossil fuel generation.

There is no capacity market here in ERCOT, and it works fine. The market pays when the market needs power. So there is room for argument about whether capacity auctions are absolutely necessary.

What FERC has done essentially is to say that renewables are too cost effective so it is going to require consumers to pay more so that consumers can have dirtier power.

That is pretty much the consequence of the minimum offer price rule or MOPR that FERC has proposed should apply to generators bidding to supply capacity in PJM. The FERC proposal was worse than I think any of us anticipated. There has been a huge response. The comments are overwhelmingly in opposition. We will see where this goes.

MR. MARTIN: Renewables are intermittent. How do they supply capacity?

MR. KIERNAN: That's correct. We are now seeing large developers piece together wind, solar and storage projects and offer customers firm or semi-firm products. I am aware of one developer that is about to combine wind, solar and storage to offer a product that mimics the electricity from a natural-gas peaker plant. It will generate the wind and solar electricity and put the electricity into storage until the customer wants it.

MR. MARTIN: PJM holds capacity auctions each year, but it did not hold one in 2019, and it does not look like it will hold a 2020 auction. The auctions are auctions of the right to supply capacity three years in the future.

Where do you think this is headed, and when will it clear up?

MR. WETSTONE: It is a mess. It is worth highlighting the extent to which this is creating huge fissures. Several states are now seriously considering withdrawing from the market because the initial PJM policy has been made worse by what FERC has proposed. The current proposals undercut state authority, which is very clear in the Federal Power Act, to decide on the resource mix each state wants for electricity. Surely FERC won't let this happen. It will have a rehearing and figure something new out.

MS. HOPPER: You are more optimistic than I am. This is a move by established business interests that feel threatened by the technologies that we represent. Today it is MOPR. Two years ago, it was ensuring a return for suppliers of electricity from coal and nuclear power plants.

These are different tools that incumbent generators are using to try to retain market share for themselves and not let us come in and compete. We can talk about the MOPR intricacies, but it is our job as folks that see a different energy future to try to ensure that there are fair market rules so that we can compete.

This is one of the areas where AWEA and SEIA are making a joint effort. These markets were designed for an electricity system that does not represent where we are today or where we are headed. We need to change them.

MR. MARTIN: Play it out. What happens if states like Maryland and New Jersey drop out? What happens to these organized markets?

MR. WETSTONE: I don't think anyone knows, but what we are talking about here is the integrity of the competitive electricity markets. It is a major concern. Imagine if the shoe is on the other foot. We have putative free marketeers essentially asserting that, "Everybody has to pay more for power to keep out-of-market coal plants operating."

PURPA

MR. MARTIN: Let's move to another topic.

FERC has made a number of proposals to modify how it implements the Public Utility Regulatory Policies Act that many people think will make it impossible to finance projects that have PURPA contracts. How important is PURPA at this point to wind and solar?

MS. HOPPER: It is really important for solar. We look at it through the lens of competition. It is an incredibly important tool to gain access in markets where there are monopolies that frustrate competition. A lot of solar development has happened because of PURPA. We think the statute is important for continued access to markets.

MR. MARTIN: For those of you who are new to this industry, PURPA is a 1978 law that requires utilities to buy electricity from certain types of projects, including smaller renewable energy facilities. In 2005, Congress dialed it back. PURPA really only applies today in places where independent generators do not have other outlets for their electricity than to sell to the local utility.

Tom Kiernan, what about wind?

MR. KIERNAN: It is not as important, so we let solar take the lead on it.

MR. MARTIN: Is any further action likely on PURPA, or will FERC just roll forward with the proposals it already made?

MS. HOPPER: Will FERC have a quorum to transact business?

MR. MARTIN: That's another question. Could FERC even take action?

MS. HOPPER: Another Friday, with more news.

MR. MARTIN: There was a lot of news on Friday. Let's start there. FERC has five members in theory, but only three currently and one of those just announced he is leaving in June. He is a Republican, which leaves only two members since there are two empty seats. FERC cannot transact business without a quorum. It needs three to have a quorum.

Explain what is happening on Capitol Hill. We have a Democratic nominee who has been waiting for some time. We have a Republican. And then we have another Republican empty seat. Where do you see this going?

MS. HOPPER: I am hopeful that the Senate will follow protocol. Traditionally, a Republican and a Democratic nominee are paired together and approved at the same time. We can all wax on about how super political things have become. FERC really does need to regulate our wholesale markets.

On the PURPA matter itself, we are deeply concerned because I think there has been a fair amount of misinformation about the "evils" of PURPA – that we don't need it anymore because solar and wind are competitive without it. As you said, we need PURPA in places where there is no competition. We filed strong comments at FERC. It wasn't just, "We are opposed to any changes." It was, "Here is a whole construct for how we can have a competitive process under the rubric of PURPA, but not give all authority to implement to the same folks who regulate the local utility."

MR. MARTIN: Are we better off at this point as a renewables industry with FERC without a quorum or with quorum? [Laughter]

MS. HOPPER: I am not going to be / continued page 50 *continued from page 49*

quoted on that. [Laughter]

MR. WETSTONE: I hope we see a two-for-one that includes the nominee suggested by the Senate minority leader along with the one pending nomination for the Democratic seat and then someone to fill the seat of Bernard McNamee who has now indicated he is leaving the commission. It if happens that way, it will be the first time in a very long time where we have had five FERC commissioners.

MR. KIERNAN: It is important in the long term to have a functioning, working FERC because of transmission and other grid issues. We have to figure out ways to have a rational means for permitting transmission throughout the country. FERC has a docket inquiry on transmission incentives that has to move forward.

Climate change, offshore wind delays, MOPR, PURPA, tariffs and transmission will remain big issues.

MR. WETSTONE: FERC used to be seen as a quiet corner for the electricity specialist that most of the world could ignore. It is now a front line for some really critical issues, as the MOPR discussion reflected. I think you will see a real battle to maintain the historic bi-partisan nature of the FERC deliberations. It is at risk today.

Other Policy Debates

MR. MARTIN: For people who were having trouble following the MOPR discussion, what is at issue is renewables and other subsidized forms of electricity have to bid a minimum price into the capacity market, and the fear is they will have a harder time winning in those auctions.

Let's ask quickly about three other FERC issues. One is there is a long gestating policy to allow aggregated distributed energy sources, like solar rooftop panels and distributed batteries, to bid into wholesale electricity markets. What opportunity will this open up that is not available currently?

MS. HOPPER: Sunrun, I believe, put together a portfolio of distributed storage assets and bid them into the ISO New England wholesale market. It should create an additional opportunity to earn revenue that, in turn, will make such storage assets more economic to install. It is transformational in terms of how we think about these distributed assets. I am hopeful that more ISOs will allow the same thing to happen.

MR. MARTIN: Another issue is storage. There was a big FERC order — 841 — that was supposed to improve the ability of storage owners to participate in organized markets. Greg Wetstone, what is happening on it at FERC?

MR. WETSTONE: RTOs have had to put together plans to make that happen. Those plans have been largely submitted. It has been a constructive process. We see more progress in some RTOs than others, but I think it has been a good start. We need to do a lot better integrating storage into the grid, taking advantage of what it brings and creating a marketplace where what storage can compete.

MR. MARTIN: More for states to do or FERC to do or both?

MR. WETSTONE: FERC can be very helpful. The RTOs can be very helpful. Some states have been out there in a big way. California and New York in particular have made some efforts really to jump start such a market. The market does not fully recognize yet what storage brings to the grid. When that happens, I think we are going to see a lot of investment released and a lot of growth. That will enable much higher levels of renewable energy penetration.

MR. MARTIN: Another FERC question involving transmission. Obama tried very hard to encourage transmission, but then ultimately gave up. There was not very much that Congress was willing to do. It did not seem like FERC could make much progress, either. Did I get this wrong? FERC has reduced the returns that transmission owners can earn from building new transmission lines. Why does that make sense?

MR. KIERNAN: My recollection is yes, it did do that.

MR. WETSTONE: The debate about transmission has evolved. There is greater awareness that our transmission infrastructure was developed initially to reach hydro facilities and then later coal facilities. Most of that was paid for by the government. There has never really been an active effort to build interstate transmission to reach prime renewable resources. Eventually, we are going to have to get there if we are going to respond in any meaningful way to the climate imperative.

MR. KIERNAN: One proposal that we have been encouraging in Congress is to have the different RTOs do their planning at the same time so that they can arrive at some joint solutions. Right now, PJM will do long-range planning and then MISO and then SPP as opposed to all three doing it at the same time and saying, "If we do some interconnects here and here, we can meet both our needs." Bills have been introduced in both the House and Senate to require FERC to have RTOs do simultaneous planning.

The point is there are some things that can be done that are not earth shattering and will improve the planning for transmission.

MR. MARTIN: There is an excellent book that came out last summer, *Superpower* by Russell Gold, a *Wall Street Journal* reporter about . . .

MR. KIERNAN: It is a quick read. It is well worth reading.

MR. MARTIN: It is an excellent book about the trials and tribulations of Michael Skelly and Clean Line Energy Partners as they tried to build a transmission line from Oklahoma to Tennessee and how one US Senator from Tennessee and one woman in Arkansas who was politically well connected and angry because the line was going to pass near her house could basically block the project. It shows the challenges of building transmission. ◎

Dieting and Project Finance

by John L. Schuster, with JLS Capital Strategies LLC in Washington

One of my proudest accomplishments in the last year was to lose 25 pounds. My doctors had said my weight was fine, but it may be important to reducing any risks of serious problems during the ongoing coronavirus pandemic.

Health benefits aside, dieting isn't a ton of fun. Surprisingly, eating and drinking whatever one wants whenever one wants is far more enjoyable than writing down every Weight Watcher's point.

The experience has made me reflect upon how dieting is like project finance.

Project finance requires submitting applications to lenders only to engage with those same lenders in what seems like an endless due diligence and negotiation process. No one would ever diet for the fun of it, and no one who could get a loan another way should ever choose project finance.

Many will be skeptical of this analogy already and the rest will be sure that the similarities end there. They don't.

A New Beginning

With dieting, finance and all things, it is best to start on a positive note. Dieting and project finance can change lives for the better. My WW App is replete with stories of positive life changes dieting has realized.

For those who can pull it off, project finance can be transformative. In the 1980s, scores of new companies that sold power to large utilities under the Public Utility Regulatory Policy Act or "PURPA" were able to use project finance to leverage their customers' larger balance sheets. Many are still around today. Those who have put in the time, seen deals through and stuck to deal covenants have achieved quantum growth. Outside of new economy ventures that can gin up investor frenzy, project finance is just about the only way to achieve this type of growth.

Crash Diets

Sadly, many diets – especially crash diets — fail. That is one reason why the weight loss industry is worth $72 billion, according to Research and Markets. The lure of an easy fix is tempting for those who want to lose weight without doing the hard work, but crash diets seldom work.

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Dieting

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The same is true for project finance. Everyone wants the big deal and the promise of growth, but it is not easy. Many sponsors of early PURPA projects were small, but they somehow managed to execute agreements for sales, fuel and construction that complied with credit requirements of their contractual counterparties. For projects in risky markets, the demands for contractual terms and credit support are harder. Borrowers who think they can project finance their deals easily invariably cannot.

This all brings us back to this article's central question that we pose in the section below.

Do I HAVE To?

Half of all Americans are currently on a diet. Except for the supermodels who should just eat something, most are dieting because they do have to. About 78 million Americans are obese. Each time I am in Europe where there is less junk food, I am reminded of lower obesity rates there, which are about half that of the US. Not surprisingly, dieting there is less popular. Only about a third of the French have ever tried to diet. If you can have all that yummy French food and wine without dieting, why wouldn't you?

The decision whether to do a project finance or some other type of finance is the same.

My first counsel to those contemplating a project financing has always been is to see if other options are available. A corporate financing – based on the financial statements of a going concern – is always easier. Yes, a corporate credit must consider a host of market, industry and other factors, but it is much easier than project financing, in which lenders assess intricate interconnections among contracts, evaluate the credit strength of all third parties, and tie up project revenues, costs and cash flows in what seems like an endless series of accounts.

To use the dieting parallel, why would you pass on a menu of foie gras, sauterne, magret de canard, pinot noir, and moelleux au chocolat for the fun of counting the points in skinless chicken breast, a half cup of rice, salad with a teaspoon of olive oil and – on special days – a carefully measured five ounces of wine? The only reason to undertake dieting or project finance is "you have to."

Some companies do a lot of project finance and, for them, it is easier. AES, one of the many companies built on project financed PURPA projects, comes to mind. Until recently, its business model has been to grow notwithstanding a sub-investment-grade credit rating by using project finance to keep debt off its balance sheet. After a lot of deals, project finance became easier. Hasn't AES chosen to do project finance?

Not really.

Even though a company may learn to do project finance more efficiently and may have developed something of a "project finance lifestyle" that has worked for a long time, if these companies could finance deals in a way other than project financing, they should do so.

The dieting analogy is helpful to understanding this point.

Like most men who annoy their wives by losing more weight than their far more deserving spouses, I went on my diet later and lost more weight more quickly than my wife. Sorry dear. In fact, I lost 12 pounds more than I had targeted. I was so successful that I thought I could stop dieting. But, as I exercised less in the colder late fall, the ballpark food during the Washington Nationals World Series run and the stuffing and pecan pie over Thanksgiving caught up with me. I quickly regained those 12 pounds. I can lose weight easily, but barring an end to baseball or an increased year around exercise program, I am not one of those super-annoying people who can eat whatever he wants.

Few can eat with no consequences, and financing large deals on a company's balance sheet can be challenging when the credit criterion that should apply to new loans is that a company must be able to carry new debt even when the project the debt is supporting is a total loss. It's a tough standard. For now, AES may continue to use project finance, but even AES has been amending its business model as it moves toward an investment-grade rating. Perhaps AES could go off its limited recourse diet, and when it can do so sustainably, it should.

A starker parallel to those annoying people who can eat whatever they want whenever they want are companies like Coca-Cola. Have you heard of Coca-Cola using project finance for its bottling plants? Some satellite companies generate more free cash each year than the cost of a new satellite. When they can bond finance or even pay cash for a satellite, why take six months to a year in a project financing?

Exceptions Prove the Rule

What about the oil majors? They are huge and they do project finance deals? Didn't Dow and Saudi Aramco use project financing for the Sadara petrochemical project? All true.

In fact, oil majors are responsible for some of the larger and more important project finance deals in most years.

But ask any of these large companies if they would use project financing if they didn't have to – especially at the end of a long

Diets and project finance have a lot in common.

and expensive finance process. They will tell you no. It does not mean they regret the decision and might even consider their experience productive. But these companies would have taken a different path if they could have.

Why do these companies use project financing?

There is a parallel to be found in dieting. Weight loss is not the only reason to diet and having no alternative is not the only reason to take on project finance. For some, dieting is necessary because of food sensitivity or other reasons. I happily found my lower weight produced a plethora of health benefits.

Many project financings are necessary because of partner concerns or structuring issues. Saudi Aramco could easily take on the $25 billion debt for the Sadara project, but it needed the petrochemical expertise of its partner Dow, for whom a $25 billion loan obligation was a challenge. The best way to execute this financing equitably between the two partners was project finance.

Most resource deals inevitably involve a large energy or mineral company that needs to involve a local, often state-owned company that controls the resource. Putting the debt on the balance sheet of the smaller partner is impossible and having the larger partner pay the debt is impractical and just wrong. Just like dieting can help with blood pressure, project finance is the key to making these deals work.

Understanding the reasons project finance might be necessary is helpful to understanding deal dynamics, deal structure and strategic concerns. Large partners have to be transparent about sponsor support issues and will need political cover from an export credit agency or multilateral development bank to ensure fair treatment by a weaker partner whose government has jurisdiction over a resource and may be tempted to mistreat its foreign partner once a project is up and running. Typically, an agency lender financing is the only way to pull this off.

Can't Lose Weight?

For many – or even most borrowers – project finance is challenging. One can have all the requisite contracts, but the credit strength of the third parties in risky market deals is challenging. Some legal risks are unavoidable. Getting equity is challenging. Should borrowers just give up?

Clearly not. Just as throwing in the towel and saying one will be fat forever is a bad choice, giving up on financing a deal is a bad approach.

Those who have read thus far will not be surprised to see that dieting offers helpful lessons.

There are many for whom weight loss is hard. Aging slows down our metabolisms. Some people have bad genes. It doesn't mean giving up, but it might mean adjusting expectations or perceptions. Men have long contented themselves with less than perfect "dad bods." Maybe a loss of a just a few pounds or avoiding an otherwise inevitable gradual drift upward is just fine.

The same applies to project finance. Those who lack enough equity might take on a partner. For others, maybe the answer is a structured financing relying on a combination of escrow accounts, pledged asset security and corporate recourse. Others might consider an incremental approach and a series of small deals. The number of solutions is almost as numerous as the number of would-be borrowers.

Doing the Work

Regardless of whether or how one uses project finance, the first and most important step is the same as in dieting: being honest with oneself. In dieting, that means writing down what you eat and keeping track of your exercise.

In finance, it means running the numbers and making a frank assessment of options. If existing free cash is too small to support debt service on a new project loan, better think of project finance or something like it. Those who cannot find fuel purchasers and product buyers with strong credits need to explore credit enhancements. A borrower need not fall on its sword about every potential problem, but one can never assume lenders will overlook problems that are out there.

It would be like over-eating and sitting on the couch and expecting the needle on the scale to drop.

Environmental Update

The US Environmental Protection Agency announced in late March that it is easing its enforcement of various environmental standards during the coronavirus pandemic on a temporary basis.

The new policy comes in response to requests from industry, which argued that workers cannot perform all of the tasks required to comply with environmental laws while complying with "social distancing" recommendations or working from home to prevent the spread of virus.

The EPA assistant administrator for enforcement and compliance assurance, Susan Bodine, made the announcement in a March 26 letter to "all governmental and private sector partners."

Bodine said that EPA will exercise broad "enforcement discretion" regarding increases of pollution released above legal limits that are linked directly to the pandemic, and that the agency will address such civil violations on a case-specific basis.

The policy reportedly applies retroactively to occurrences from March 13 forward until told otherwise.

While it appears that the EPA may refrain from enforcing against facilities that cannot meet certain legal obligations under agency regulations, it remains uncertain what failures will eventually be determined by the EPA to be linked sufficiently to the outbreak to merit relief.

The temporary enforcement discretion policy applies to civil violations during the coronavirus outbreak only.

Caveats

It does not provide for any leniency for criminal violations of federal environmental laws, which often require an element of intent.

Further, the policy does not apply to activities carried out under RCRA corrective action enforcement or the Superfund law. It is possible that EPA will address those matters in future policy announcements.

Different categories of civil noncompliance are to be treated differently under the policy. For example, EPA does not expect to seek penalties for noncompliance with routine monitoring and reporting obligations that result from the pandemic, but EPA does expect operators of public water systems to continue to ensure the safety of their drinking water supplies.

The guidance directs facilities to contact EPA or other appropriate regulators if operations affected by the outbreak could either create an acute risk or imminent threat to human health or the environment, or if there is a failure of air emission control, water treatment systems or other equipment that could result in exceedances of enforceable limitations, land disposal or other unauthorized releases.

In short, the policy makes it clear that EPA expects regulated facilities to comply with regulatory requirements, where reasonably practicable, and to return to compliance as quickly as possible.

The policy also describes the steps that regulated facilities should take to qualify for enforcement discretion. To qualify, the owners or operators of facilities must document decisions and steps made to prevent or mitigate noncompliance. Noncompliance must be caused by the pandemic.

The best advice is to make every effort to comply, and keep those efforts documented on an ongoing basis. Consideration should also be given to notifying EPA on a timely basis of those steps and non-compliances, and should certainly be done promptly when more serious issues arise. Demonstrable efforts to keep open the lines of communication with regulators may be seen in a positive light when determinations on whether to seek enforcement are eventually made.

EPA makes this point clear in a footnote to its new policy: "Regulated entities who voluntarily discover, promptly disclose, expeditiously correct, and take steps to prevent recurrence of potential violations may be eligible for a reduction or elimination of any civil penalties that otherwise might apply. Most violations can be disclosed and processed via the EPA's automated online "eDisclosure" system (see https://www.epa.gov/compliance/epas-edisclosure). To learn more about the EPA's violation disclosure policies, including conditions for eligibility, please review the EPA's Audit Policy website at https://www.epa.gov/compliance/epas-auditpolicy."

It is possible that implementation of the policy will be challenged in the courts as overly broad and without legal foundation, casting uncertainty over a party's ability to count on the policy as protection down the road.

Whatever the reach and validity of the policy at the federal level, the most important point for the regulated industry to note is that the policy appears limited to EPA, and most states have been delegated authority to enforce federal environmental laws.

Bodine included the following warning in her letter:

"Authorized states or tribes may take a different approach under their own authorities. The EPA will undertake to coordinate with other federal agencies in situations where the EPA shares jurisdiction over a regulated entity's environmental compliance obligations."

The policy itself notes that "[m]any states also offer incentives for self-policing; please check with the appropriate state agency for more information."

Thus, it appears that this policy may offer limited real-world protections for regulated facilities, except where EPA is the regulator or where the facility is located in a state that eventually follows suit.

Environmental groups and some former top Obama EPA officials have raised concerns that the temporary plan will become an indefinite nationwide waiver of environmental regulations.

EPA's policy on enforcement during the covid-19 outbreak can be found here: https://www.epa.gov/enforcement/enforcement-policy-guidance-publications

Regarding the policy's duration, EPA notes that, "[i]n order to provide fair and sufficient notice to the public, the EPA will post a notification at least seven days prior to terminating this temporary policy. Any such announcement should be made available here: https://www.epa.gov/enforcement/enforcement-policyguidance-publications

Deregulatory Efforts

EPA's new enforcement discretion policy flows in part from requests from a myriad of industry groups that EPA suspend enforcement during the outbreak. At the same time, many of those same groups have also been asking EPA to find ways to offer broader regulatory exemptions to ease the impact of the economic crisis.

The Trump administration has already been rolling back a number of environmental regulatory measures from the Obama-era.

The US Department of Transportation and EPA announced a further rollback of Obama-era vehicle greenhouse gas and fuel economy standards as the NewsWire went to press. The joint agency action comes in advance of a statutory deadline requiring DOT to release new fuel economy standards.

The rollback is expected to allow new vehicles in the US to emit approximately one billion tons of carbon dioxide more over their expected lifetimes than they would have under the prior standards.

Automakers will now have to increase the fuel economy of passenger cars by just 1.5% a year as opposed to 5% a year earlier.

This is the second stage of the effort to ease limits on tailpipe emissions from vehicles.

In September 2019, the Trump administration blocked California from setting tougher tailpipe pollution standards than the federal standards, a power California has held since the Clean Air Act was first passed more than four decades ago. At that time, because California had already been working to address its unique air pollution problems, the federal government let it write its own rules as long as those rules are at least as strict as federal law.

Legal challenges are already underway over whether California can have tougher standards. Further litigation over the change in fuel economy standards at the national level is inevitable.

Aside from autos, EPA continues to move forward with draft guidance easing strict air permitting requirements for various industry sectors.

For example, EPA is considering draft guidance that might allow industry to start constructing projects that might increase air emissions without first obtaining a new source review air permit.

The draft seems to suggest that EPA will limit its understanding of the

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The Trump administration rolled back federal auto tailpipe emissions standards in early April.

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term "begin actual construction" under new source review regulations to construction of an "emissions unit." An emissions unit is the piece of equipment that has the potential actually to emit pollution.

The latest construction guidance appears to apply to federally issued permits and those issued by entities with EPA-delegated permitting authority. The draft guidance is merely recommended for state regulators who issue permits under EPA-approved state implementation plans for complying with federal air standards.

Other ongoing efforts include limiting consideration of climate change in environmental reviews for many infrastructure projects, easing controls on ash from coal plants and loosening restrictions on mercury emissions.

The push early in 2020 is intended to shield the policies from easy reversal if Trump loses the White House in the 2020 election. Under the Congressional Review Act, Congress can overturn a federal regulation or rule within 60 days after it is finalized. If Democrats win control of the White House and Senate in November, and keep control of the House, any rule completed after late May or early June would be vulnerable. ◎

— contributed by Andrew Skroback in New York