STATE OF WISCONSIN
DEPARTMENT OF ADMINISTRATION
Tony Evers, Governor
Joel Brennan, Secretary
Brian Pahnke, Administrator

CORRESPONDENCE/Memorandum

Date: October 7, 2020

To: Joel Brennan
Secretary, Department of Administration

From: Division of Executive Budget and Finance

Subject: Eligibility Determination for the Electronics and Information Technology Manufacturing Zone Credit Award

At your request, staff in the State Budget Office most familiar with the Contract and related tax-credit eligibility have provided background related to the factors that are weighed as to whether Foxconn has earned eligibility to receive tax-credit payments for their performance as set forth in their April Submissions. This question is material to our office's budgetary work. Our analysis and conclusions are summarized below.

Introduction

On November 10, 2017, consistent with 2017 Act 58, the Wisconsin Economic Development Corporation ("WEDC") entered into a public-subsidy agreement with three Foxconn affiliates — FEWI Development Corporation, SIO International Wisconsin, Inc. and AFE, Inc. — collectively designated as the "Recipients" in the parties' Electronics and Information Technology Manufacturing Zone Tax Credit Agreement (Contract #EITMZ FY18-23932) (the "Contract"). The Department of Administration played a supportive role in the pre-contract formation process leading up to the execution of the Contract, and has also been actively involved since in monitoring and assessing the Recipients' performance of the Contract and in communications and meetings with both WEDC and various representatives of the Recipients in regard to their performance with respect to the Contract. The Contract calls for annual determinations by WEDC as to the eligibility of the Recipients to earn tax-credit payments from the state for their performance of the project described in the Contract in the prior calendar year(s) as to job creation and capital investments per the terms and conditions in the Contract.

On April 1, 2020, the Recipients submitted their Performance Report and Tax Credit Workbooks ("the Workbooks") with Payroll and Capital Expenditure Forms (collectively the "April Submissions") as part of the verification process for WEDC to determine the Recipients' eligibility for job-creation tax credits for work performed during calendar year 2019 and capital expenditure tax credits for expenditures made during calendar years 2018 and 2019. The written instructions (the "Instructions") to the Workbooks provided by WEDC to the Recipients in advance of their April Submissions state that eligibility to earn tax credits under the Contract is limited to only those "Full-Time Jobs" created by the Recipients and "Significant Capital Expenditures" made in the "Zone" by the Recipients that directly pertain to construction and operation of the "Project", a Generation 10.5 TFT-LCD Facility located in the "Zone" (throughout this memorandum, the capitalized terms in quotes in this sentence

and elsewhere in this memorandum have the meanings defined in the Contract). In their April Submission, the Recipients made no effort to comply with the clear Instructions or state any disagreement with their applicability. Instead, the Recipients' April Submission lists various jobs and expenditures having nothing to do with the required Generation 10.5 TFT-LCD Project.

Question Presented:

Is the project performance of the Foxconn Recipients detailed in their April Submissions eligible under the Contract to receive tax-credit payments from the state?

Brief Answer:

No. The Recipients' project performance does not satisfy the requirements of the Contract. Because none of the jobs or capital expenditures listed in the Recipients' April Submission relate to construction or operation of the contractually required Generation 10.5 TFT-LCD Project, none are eligible for tax credits under the Contract. Further, the new type of development activities that the Recipients have chosen to pursue are neither quantitatively nor qualitatively similar to the Project specified under the terms of the Contract.

Summary

The above conclusion is consistent with what WEDC's leadership and other senior representatives of the state have stressed to the Recipients orally and in writing over the past 16-plus months. We also are aware of no objection (either at the time or subsequently) by the Recipients to the correctness of the Instructions for the Workbooks WEDC provided to the Recipients prior to the Recipients' April Submissions. Staff also believes that, in addition to the overarching eligibility failing noted above, the Recipients fell short of the job minimum set in the Contract for the year ended 12/31/2019. To be counted as an eligible Full-Time Employee for the year claimed, the employee must have been paid regular employment compensation by 12/31 of the year being evaluated. That requirement eliminates a number of the jobs claimed in the Recipients' April Submissions. Additionally, the compensation paid by 12/31 must be at a rate, when annualized, of at least $30,000 (plus the benefits specified in the Contract). This requirement also eliminates a number of the claimed jobs in the April Submissions.

The Contract specifies an expectation that 2,080 people should have been employed at a Generation 10.5 TFT-LCD Project by 12/31/2019. The Contract sets the required minimum at 25% of that level; namely, 520 eligible Full-Time Employees. Staff believes that the Recipients fell short of that job minimum for 2019. They also missed the jobs minimum for the prior year, 2018.

Finally, staff notes that, as WEDC has previously stated, only the three Recipients that are parties to the Contract are eligible to seek tax-credit subsidies from the state for financial contributions made in the Zone. The three Recipients are the only Foxconn affiliates which applied in 2017 to WEDC, and were the only entities evaluated and certified by WEDC. The Recipients also were the only entities which provided guarantees to cover potential "claw

backs" of credits under the resulting Contract. Hence, it merits mention that whatever financial contributions that Foxconn Industrial Internet ("FII") (which is not a party to the Contract) may have made to date as to the improvements in the Zone, including those that have been referred to by Foxconn and/or FII in media reports from time to time as the FII Data Center, the FII Smart Manufacturing Center, the FII Artificial Intelligence (AI) Institute and the FII Planning Center, are ineligible under the Contract. Should FII wish to apply for credits as to its future development activities, it would be required to follow the process outlined in the Contract which was explained to the Recipients in writing and orally over the past year and a half by WEDC and the state.

The Generation 10.5 TFT-LCD Project Requirement

The "Project" the Recipients committed to build and operate per their project Applications to WEDC and the Contract was, as defined at section 1-(o) of the Contract, a "Generation 10.5 TFT-LCD Fabrication Facility." It is undisputed that the Recipients have neither built, nor started to build or operate, the required Generation 10.5 TFT-LCD Fabrication Facility. Representatives of the state have determined that fact from their own observations and evaluations, from an industry expert hired to provide consulting services, and, in recent months, from the Recipients themselves, who have acknowledged that fact. Nor have the Recipients provided evidence that they have any specific formal business plans to build the promised Generation 10.5 facility in the Zone by 2025, the final year provided in the Contract for earning capital-expenditure credits.

Starting in March 2019 and continuing through to the Recipients' April Submission, WEDC and other representatives of the state, including the Secretary of DOA, repeatedly stressed to the Recipients orally and in writing that the Recipients were not eligible to earn tax credits under the Contract for business development activities different than the Generation 10.5 Project specified in the Contract. The Recipients were also repeatedly reminded that, if the Recipients wished for their activities in the Zone to become eligible, they first needed to negotiate amendments to the Contract that aligned the terms of the Contract with the reality of the Recipients' materially changing plans in a manner that fairly benefited both sides. Starting with former WEDC Secretary Mark Hogan in early 2019, the Recipients were informed that there is a process for seeking amendments which starts with new project applications being submitted which detail the specifics of the type of new business development activities the applicant(s) would like WEDC to evaluate and certify (See also Contract section 7-i, governing the process for amendment requests). Despite repeated and consistent communication from WEDC and the State regarding the necessary amendment process, the Recipients chose not to pursue the amendment opportunity prior to submitting their April Submissions.

The state's position about the contractually mandated Generation 10.5 TFT-LCD Project has never changed. Throughout the entire contract-formation period from June 2017 through to entering into the Contract on November 10, 2017, the parties focused exclusively on making the construction and operation of a massive Generation 10.5 TFT-LCD facility the "Project".

In the Spring of 2017, Foxconn shared a detailed Request for Proposals (RFP) with Wisconsin and several other states. The RFP laid out the potential that, in return for Foxconn's desired level of public subsidy, the company would construct and operate either or both a massive

Generation 10.5 TFT-LCF Facility (termed the "FAB 818" in the RFP materials) and/or a smaller Generation 6 type of facility (termed a "FAB 868" in the RFP materials). Wisconsin chose to support and subsidize only Foxconn's construction and operation of the so-called FAB 818 Generation 10.5 TFT-LCD facility described in the Foxconn RFP materials, and not the smaller Generation 6 FAB 868 type of facility.

The July 27, 2017 Memorandum of Understanding (the "MOU") for the project entered into by then Governor Walker for the state and then Chairman/CEO Terry Gou for the Foxconn entities memorialized the parties' commitment to basing the project on solely the FAB 818 Generation 10.5 TFT-LCD facility. According to the MOU, the intent of the parties was that the project would involve the "construction, start-up, and ongoing operations" of the FAB 818 Generation 10.5 TFT-LCD facility producing glass substrates (MOU p.1). The 3-page MOU mentions the FAB 818 Generation 10.5 facility nine (9) times. It does so in most every paragraph, and never mentions the alternative FAB 868 Generation 6 type of project, nor any other type of business development activities as being included in the agreement.

From the MOU forward, the entire contract-formation process focused exclusively on the Generation 10.5 TFT-LCD "Project". The Recipients' project Applications to WEDC focused exclusively on the Generation 10.5 facility, which the Recipients defined and explained in Attachment 3 to the Recipients' September 15, 2017 Application. Similarly, both WEDC's "Opportunity Recommendation Memo" dated 8/18/2017 and its later 11/07/2017 detailed "Staff Review" of the project signed as "approved" by the then 5 most senior officials at WEDC, mentions only the Generation 10.5 TFT-LCD facility as the business activity being underwritten and evaluated. The economic analyses by Ernst & Young and Baker Tilley used by proponents of the project to help justify its merits and the subsidy levels also focused expressly on the proposed Generation 10.5 TFT-LCD project and not any other type of alternative business development activities.

The Contract reflects this background and the parties' intent as set forth in the MOU. It specifically defines the Generation 10.5 TFT-LCD Facility as "the Project". The 4th recital to the Contract summarizes the overall deal as one in which the state promises to provide up to three billion dollars in subsidies "in exchange for [the Recipients] siting the Project in Wisconsin, making a capital investment of up to Ten Billion Dollars ($10,000,000,000) and creating up to thirteen thousand (13,000) Full-Time Jobs..." (emphasis added). Again, using the defined term "Project", the Contract requires the Recipients to do various things to carry out the "Project". See, e.g., Contract section 4-a, b, d and g. The Recipients have not sited a Generation 10.5 TFT-LCD project in Wisconsin and none of the jobs or capital expenditures listed in their April Submissions pertain to the required "Project". Therefore, none of the job and capital expenditure listings set forth in the Recipients' April Submission should be eligible to be subsidized at taxpayer expense.

The terms of the Contract affecting the state presumably would have been negotiated to be materially different than they are had there been a shared understanding that the Recipients could earn tax credits for any type of business activity of any scale or nature rather than the project specified and agreed to. The present mix of smaller scale development activities being pursued by the Recipients are described by the Recipients to be far more automated than the Generation 10.5 factory and are expected to generate far fewer Wisconsin jobs relative to the level of capital expenditures than the Generation 10.5 facility. As a result, application of the current Contract terms to such activities would result in a higher per-job cost to the state

and less likelihood of such a project ever generating a net benefit to the state's taxpayers funding such subsidies.

The Recipients' decision to substantially change the scope and nature of their business-development activities in the Zone away from the agreed Project materially affects the state's interests in multiple respects. When the state decides to provide direct subsidies for any large project, it is in pursuit of furthering specific economic and policy objectives. It is not enough that an applicant offers to build some buildings and create some jobs. The state only has the resources to subsidize a fraction of the new developments and jobs created each year in the state. The goal of targeted economic-development subsidies is that they are crafted to advance specific state objectives such as building up a particular industry sector in a specific area of the state or enhancing a particular labor market segment or location. Those arrangements are also crafted to ensure that the state's taxpayers will receive a net benefit from the development, typically within the term of the agreement. When a developer contracts to pursue a specific development that the state has agreed in advance fits the state's objectives, the developer is not free to later switch the scale and nature of its development without amending the subsidy contract in advance in consultation with the state. The 15% and 17% investment and job subsidies offered by the state here as part of the EITMZ Contract are far higher than any other type of development subsidy ever offered by the state and were for a very specific type and nature of project that would advance specific objectives of the state. The total amounts of the available subsidies under the EITMZ Contract were also unprecedented. There would have been no need or justification for the state to offer such extraordinarily large subsidies for what the Recipients have now decided to pursue.

The relationship between the promised nature of the massive Generation 10.5 TFT-LCD Project and its effect on the interests of the state's taxpayers is reflected in all of the various analyses at the time. For instance, in the Legislative Fiscal Bureau's initial analysis of 2017 Wisconsin Act 58 and the Foxconn project (dated 8/21/21017) and its later analysis (dated 10/04 2017), LFB discussed DOA's analysis about when the proposed deal would have a "break-even" point (under the stated assumptions) by which year the deal would become positive for the state's taxpayers. DOA projected that the Generation 10.5 project might break even by 2042 if the Recipients' hired 13,000 full-time direct employees for the promised facility by 2021. LFB noted in both analyses, however, that, if the nature of the Project were to change such that the Recipients hired only 3,000 full-time direct employees at the facility by 2021, the project would not yield a net benefit for the state's taxpayers "until well past 2044-45" (8/21/2017 analysis at p.22 and 10/04/2017 analysis at p.27). WEDC contracts have historically always had a projected break-even point within the term of the contract. There would be no reason for the state to contract to provide business-development subsidies for activities without being able to demonstrate a reasonable "break-even" date by which the taxpayers paying the subsidies could be expected to benefit on a net basis.

The decision to locate the EITM Zone in the Village of Mt Pleasant based on the statutory requirement in Wis. Stat. 238.396 (1m)(d) that "to the extent possible, preference [should be given in the siting decision to the area in the state] of greatest economic need" made sense for the proposed massive Generation 10.5 facility projected to employ 13,000 area residents in largely blue-collar manufacturing factory jobs. However, the siting designation would have made less sense for a small highly automated facility employing mostly engineers and other white-collar professionals. The latter types of potential employees are unlikely to be unemployed or underemployed local residents in that area of the state looking for work and

more likely to be residents commuting from nearby Illinois who would pay their state personal income taxes in Illinois, not Wisconsin. Similarly, it would have been highly unlikely that the state would have entered into the Moral Obligation Agreement on its present terms if the Recipients needed only to construct the modest level of improvements presently slated because a million to two million square feet of such improvements obviously is less likely than the 20 million square feet of improvements promised for the Generation 10.5 facility to cover the $1.4 billion valuation increment increase necessary to cover the TID-5 debt service. Finally, the present type of much smaller and more automated type of project would have needed far less costly state, county, and local investments in roadway, sewer, water, and other infrastructure improvements than the Generation 10.5 facility contracted for but no longer pursued by Recipients.

Recipients Are Off the Pace of Performance Contemplated by Their Project Applications and the Contract

In the Performance Report submitted as part of their April Submission, the Recipients acknowledged that they had invested only 2.8% of the total $10 billion contemplated by the Contract. According to their 11/07/2017 updated project Applications (see section 1-c of the Contract and Attachment 8 to the Applications), the Recipients had contracted on the basis that they would invest over $10 billion for the Project in the Zone and directly employ 13,000 Full-Time Employees by 2022. By the end of 2020 (just a few months from now), the Recipients' applications projected a total employment level of 5,200 Full-Time Employees and total investment of $6.27 billion in the Zone. Regardless of eligibility, they are not close to that pace of progress and have provided no evidence of specific formal plans to catch up.

From information the state is able to review, the level of the Recipients' employment in the state has likely dropped in 2020. That pattern is inconsistent with demonstrating any reasonable likelihood that they are on track to reach even the job minimums required for 2020. In addition, the pattern of hiring spikes at the year-end December job reporting deadline followed by drops in the following months also fails to meet the requirement in the Contract that the Recipients must "maintain" their employment levels for "180 consecutive months" starting January 2018 (Contract at section 4-c).

The building in the Zone sometimes referred to by the Recipients as their Generation 6 FAB is not similar to the Generation 10.5 TFT-LCD facility called for by the Contract. The facility referred to by the Recipients as a Generation 6 FAB is far smaller than even the type of facility described as a Generation 6 FAB 868 in Foxconn's original RFP, which WEDC chose not to subsidize. DOA's technical expert reports that the present "FAB" facility – if operational – would be the smallest Generation 6 operating anywhere in the world. It is less than one-twentieth the size of the promised Generation 10.5 Project and would employ — if it ever became fully operational — only a small fraction of the local residents who WEDC expected to be employed by the required Project and for whom the Zone was located in a specific Wisconsin county and community. The Recipients' new building also is not equipped to fabricate glass substrates, a key attribute of any true TFT-LCD "FAB" facility. The LCD glass technical expert consulted by DOA has advised that the building the Recipients have been describing in the media as a "Gen 6 FAB" is not a true TFT-LCD fabrication facility to manufacture ultra-thin glass substrates. It is not designed or equipped to fabricate TFT-LCD glass substrate panels; the expert reports that it appears to be a place equipped to perform

some assembly operations, and may be better suited for demonstration purposes rather than as a viable commercial glass fabrication facility. The Recipients applied for and were granted a state permit earlier this year to use that building for storage at least temporarily rather than manufacturing, so it is off track to be considered a viable manufacturing facility for fabricating glass substrates of any size.

A Determination of Ineligibility Would Not Be Unfair to the Recipients

The Recipients abandoned the Generation 10.5 Project agreed to in the Contract for their own internal business reasons and switched to a project that is far smaller and materially different in nature than the expected Generation 10.5 Project. They did so without providing the formal advance notice to WEDC required by the Contract (see section 4-g-iv) and without seeking WEDC's formal written consent to the changes through timely amendments to the Contract. The Recipients' plans for the Zone have fluctuated over the past two years with minimal transparency.

State and local taxpayers have already provided significant support to the Recipients, in anticipation of the Project contemplated in the contract. Taxpayers fully performed their side of the agreement to date, while the Recipients have not.

Since the Contract went into effect, state and local taxpayers made large investments by providing job training, applying sales-tax exemptions, and building new roads and other infrastructure crafted in scale and type to fit the expectation that, as specified in both the Contract and the Development Agreement between the Recipients and the local units of Wisconsin government as to the Mt. Pleasant TID-5, the Recipients would be spending up to $10 billion on building a massive 20 million square foot LCD fabrication facility that would directly employ about 13,000 people. Even ignoring both the large financial commitment by the local taxpayers to the TID around the Zone and the several hundred million dollars state and federal taxpayers spent on the portion of the I-94 Interstate adjacent to the real estate transferred to the Recipients in the Zone, state taxpayers have spent as much if not more than the Recipients have spent to date on improvements in and around the Zone.

Those taxpayer funded costs have benefitted the Recipients by improving the value of the real estate transferred to the Recipients as part of the Development Agreement with the local units of government, which also specifically requires Foxconn to build the Generation 10.5 Project. Given the low levels of employment in the Zone to date, it seems unlikely that Wisconsin taxpayers will ever see a net benefit as to even these upfront costs. Moreover, the Recipients' unilateral decision to build a much smaller and drastically different project than the one specified in both the Contract and the Development Agreement increases the financial exposure of the state's taxpayers to make future payments on the Moral Obligation Agreement.

19 February 2020

To: Department of Administration
Office of the Secretary

Responses to Questions Posed About the Foxconn Project in Wisconsin

The Wisconsin Department of Administration has asked DSCC to address specific questions regarding the current status of the Foxconn project. The Department of Administration has made this request to DSCC based on DSCC's experience and expertise in the flat panel display industry. The Department has made available to DSCC extensive public information which has been utilized in answering these questions. DSCC has used additional information from other public sources and its own database of information on the display industry.

We hold the views expressed in this report to a reasonable degree of certainty in our field of expertise pertaining to the flat panel display industry.

Question 1 - Is the work that Foxconn is currently doing in Wisconsin "directly supportive" of a Gen 10.5 TFT-LCD fabrication facility (hereinafter "Gen 10.5 fab")?
No. The work that Foxconn is currently doing in Wisconsin is supportive of a small version of a Gen 6 fab, not a Gen 10.5 fab, and a Gen 6 fab does not serve as a precursor to a Gen 10.5 fab. In various sites in Asia, the flat panel industry has a total of 28 different Gen 6 fabs, and, of those sites, 27 of them have no corresponding Gen 10.5 facility. Of the four Gen 10.5 fabs currently running in China, only one (the BOE fab in Hefei) is even in the same city as a Gen 6 fab.

Question 2 – Are you aware of any evidence that Foxconn is working on a path to build a Gen 10.5 fab in Wisconsin?
No. We find no evidence that Foxconn is working on a path to build a Gen 10.5 fab in Wisconsin. The plans that Foxconn has submitted and the construction of facilities to this date do not put Foxconn on any reasonable path to building a Gen 10.5 fab within the timeline of the project specified in the applications Foxconn submitted to the WEDC in November 2017. The building Foxconn presently is constructing is described by Foxconn as a Gen 6 fab, and it is far too small to be converted to Gen 10.5 production.

Question 3 - Is there any likely market opportunity that a Gen 10.5 facility in Wisconsin presently would serve?
The only market segment large enough to support demand for a Gen 10.5 fab is the television market. There is a market for large-screen TVs in North America that could theoretically be served by a Gen 10.5 fab in Wisconsin. However, massive expansions of Gen 10.5 fabs in China, supported by lavish government subsidies, have created a severe oversupply of LCD TV panels, which has driven down prices. In this

environment, even Foxconn's plans for a Gen 10.5 fab in Guangzhou, China have been delayed, and a portion of that expansion has been canceled.

In the spring of 2017, as Foxconn initiated discussions with states including Wisconsin about a Gen 10.5 fab, LCD TV panel prices were relatively high, which would have made such an investment seem attractive. However, even in spring 2017 it was clear that huge investments in Gen 10.5 capacity in China, including by Foxconn, would be likely to alter the supply/demand balance and drive LCD panel prices down. By 2nd quarter of 2018, LCD prices were falling sharply, making the investment less attractive. Foxconn eventually conceded that a Gen 10.5 plant in the US was not economically viable.

Question 4 – Have you seen any indication that Foxconn is proceeding with equipment orders and other activity to start operating a TFT LCD Gen 6 fab in Wisconsin within the near future?

In describing a production facility for LCD panels, it is important to draw a distinction between the various stages of production. The production of a device (such as a TV or a desktop monitor) which uses an LCD can be described in the following steps:

1) TFT Array. In this stage, in a series of steps involving photolithography, an array of millions of thin film transistors (TFTs) is constructed on a glass substrate. These TFTs form the electronic circuits which will determine the picture content when the LCD is operating. The TFT Array process is similar to the process used to make semiconductors and requires massive equipment with heavy investment. Because this process requires an extreme clean-room environment, the process is highly automated, and requires few workers.

2) Color Filter. In this stage an array of colored pigments is deposited onto a second glass substrate. Typically, red, green, and blue (RGB) pigments are deposited onto the substrate in triads that define pixels (picture elements). Each pixel has three sub-pixels, and display resolution is typically characterized by the number of pixels. For example, a "4K" or "UHD" TV has 3840 pixels across the horizontal dimension, and 2160 pixels across the vertical dimension. The color filter process also uses photolithographic equipment but at a lower resolution so the investment is less. Like the TFT Array, color filter production is highly automated and requires few workers. The color filter process is sometimes outsourced to another company, but with large Gen sizes of glass substrates (Gen 8.5 or Gen 10.5) this production is almost always co-located with the TFT Array process.

3) LC Cell. In the cell process the TFT Array and Color Filter are combined to make a liquid crystal "Cell". A small amount of liquid crystal is deposited on the TFT array substrate, then the color filter substrate is placed on top forming a sandwich-like structure with the liquid crystal as the filler, and the two glass

substrates are sealed with an epoxy. The layer of liquid crystal is extremely thin (approximately 3-4 micrometers). After the glass substrates are sealed, they are cut into individual glass panels: a Gen 10.5 substrate can be used to make six 75" LCD TV panels, or eight 65" LCD TV panels, or a larger number of smaller panels. Like the TFT Array and Color Filter processes, the LC Cell process is capital intensive and highly automated, and requires few workers.

4) LCD Module Assembly. For an LC Cell to be used as a display, it must be connected to electronics and a backlight. The LCD "Module" assembly steps include attachment to the LC Cell of various optical films, drive electronics and a backlight assembly. These stages require less sophisticated equipment but are more labor intensive, so larger numbers of workers are required.

5) Device Assembly. Ultimately, the LCD Module will be assembled into a device such as a TV, desktop monitor, tablet, etc. The assembly steps will depend on the device features. Such assembly also requires less sophisticated equipment but is more labor intensive, so larger numbers of workers are required. Because of their labor intensity, Device Assembly and LCD Module Assembly are often done in sequence in the same location in a low-wage area. Most of the world's TVs, monitors and laptops are assembled in China.

   Steps 1-3 all involve working with the glass substrate as the main unit of production. Glass substrates are defined by their Gen size, and the equipment used for steps 1-3 is characterized by the specific Gen size, so the process can be referred to as "Gen 10.5 TFT Array process" or "Gen 6 color filter process".

   After stage 3, the substrate has been cut into panels, so it is no longer relevant to describe the process in terms of Gen size. A 65" LCD panel can be made on a Gen 10.5 fab, or a Gen 8.5 fab, or a Gen 6 fab, and the assembly steps 4-5 are independent of the original Gen size. Thus, it makes no sense to describe "Gen 6 LCD Module assembly", instead we would refer to "65 inch LCD Module Assembly" or "24 inch LCD Module Assembly".

By monitoring public statements from flat panel display makers, equipment companies, and government databases, DSCC maintains a comprehensive list of all flat panel display fabs and fab expansions underway in the industry. The flat panel industry has a limited number of players, and an even smaller number of suppliers of key equipment, so DSCC is confident that our database covers 100% of the flat panel display industry.

Our current database includes all 84 different facilities, or phases of facilities, with planned mass production starts from Q1 2020 to Q3 2026. For all of these expansions, DSCC records equipment purchase orders as disclosed by equipment vendors. DSCC has not seen any equipment orders for the Foxconn – Wisconsin fab, nor any indication that such orders are imminent.

It is conceivable that Foxconn could choose to transfer equipment from existing production lines in Asia to achieve a faster timeline. Foxconn has never indicated that it would transfer used equipment from its Asia fabs, and there are no precedents for such an intercontinental transfer, therefore it is difficult to estimate how much time could be saved. We have seen no activity from Foxconn affiliates in Asia to de-commission any Gen 6 equipment.

If Foxconn would transfer equipment from Asia, that equipment would need to be removed from its existing production line, packed, shipped by boat, rail, and truck (air shipping would be prohibitively expensive), unpacked, installed, and tested before being put into production. Such a process would take 12-18 months.

Finally, a Wisconsin site operating used equipment would not represent world-class, state-of-the-art manufacturing. Gen 6 manufacturing was first accomplished by Sharp in 2004, and the industry has progressed in many ways in the years since Gen 6 was new.

Question 5 - what is a likely timeline for starting to operate a Gen 6 facility in Wisconsin, given what Foxconn has communicated and what activity is underway?

Until late 2019, Foxconn asserted that it would be manufacturing TFT LCD panels in Wisconsin before the end of 2020. Because there have been no equipment orders, that timeline is not achievable. Recently Foxconn has indicated that TFT LCD production would happen in 2022. If mass production would be scheduled for Q2 2022, we would expect equipment orders to start in Q3 2020 and to continue for 12-18 months, and we would expect equipment installation to start in Q2 2021.

While TFT LCD requires specialized equipment with long lead times, this applies mostly to the first and most difficult stage of production, the TFT Array. Assembly operations, where a TFT LCD Cell is imported from Asia and assembled along with other components into a finished product, could be started on a faster timeline. Such assembly operations would not be the first such operations in North America. Foxconn and other companies are doing this type of basic assembly operation in Mexico today.

If Foxconn were to initiate assembly operations alone, this would not constitute a “Gen 6” facility, since Gen 6 refers to a substrate size for TFT Array, Color Filter, and LC Cell operations as described above. The original contract between Foxconn and the WEDC defined a Gen 10.5 TFT LCD project, and supporters of the project defended the high level of subsidies in the contract as being justified by the unique nature and massive size and cost of the specified Gen 10.5 TFT LCD project. The Foxconn Wisconsin project as originally defined would be the first TFT LCD manufacturing in North America. An LCD assembly operation would not be the first such operation in North America.

Question 6 - How big is a Gen 6 fab, compared to a Gen 10.5 fab? How big are existing Gen 6 fabs in Asia, and how does this compare with Foxconn's apparent Wisconsin plans?

The appropriate method to evaluate the size of a flat panel display fab involves multiplying two factors, the Gen size and the throughput. The Gen size is the size of the glass substrate which is the basis for production. The throughput is typically expressed in substrates per month, with multiples of 15,000 being common in the industry.

A Gen 10.5 fab has a substrate size of 2940mm * 3370mm, or 9.91 square meters (approximately 106.6 square feet), while a Gen 6 fab has a substrate of 1500mm * 1850mm, or 2.775 square meters (about 30 square feet). Thus, from an area standpoint a Gen 6 is (2.775/9.91=) 28% as large as a Gen 10.5.

Foxconn did not disclose the throughput of the Gen 10.5 that was originally planned for Wisconsin, but in a public statement they indicated that it would have the same capacity as the Gen 10.5 which was being constructed by a Foxconn affiliate in Guangzhou, China. The Guangzhou fab was planned for a capacity of 90,000 substrates per month.

Foxconn also has not revealed the expected capacity of the Gen 6 fab under construction in Wisconsin, but based on the size of the building and the investment figures cited, DSCC estimates that the Gen 6 fab will have capacity of 7,500 substrates per month. Thus, from a throughput standpoint, the current plans are (7500/90,000=) 8.3% as large as the original plan.

The full capacity of a flat panel fab is appropriately expressed in terms of area per month. The original capacity of the Gen 10.5 fab planned for Wisconsin was (9.91 * 90,000 =) 892,000 square meters per month. The capacity of the fab being constructed is only (2.775 * 7500 =) 20,800 square meters per month. Thus, in area terms, the current fab is only about 2.3% as large as the original plan.

The huge difference in scale between the original plan and the current plan translates to a qualitatively different fab. The original Gen 10.5 plan was of sufficient scale that suppliers would find it attractive to locate nearby, since the demand from the Gen 10.5 fab would be sufficient to support an economically viable operation. The quantities required for a small Gen 6 fab as currently envisioned would be far too small to justify the need for local production, and therefore we would expect that almost all materials and components would be imported.

Currently the only Gen 6 facilities operating in the world are in Asia. The Gen 6 sites operating in Asia range from a capacity of 15,000 substrates per month up to 240,000 substrates per month. The largest site is operated by Innolux, a Foxconn group company, in Tainan, Taiwan. The original Request for Proposal submitted on behalf of Foxconn to the WEDC on May 15th, 2017 described Fab 868 as a Gen 6 facility. Based

on the described size and investment in the RFP, DSCC estimates that Fab 868 was planned for a throughput of 90,000 substrates per month.

In a 2019 meeting with Foxconn representatives, Wisconsin state officials were given information about the Sharp K1 fab, a Gen 6 fab in Kameyama, Japan. According to that document, the K1 fab had a total floor area of 130,000 square meters (approx. 1.4 million square feet), roughly 40% larger than the Foxconn manufacturing building in Wisconsin. The same briefing document indicated that K1 employed 300 production personnel.

According to DSCC's capacity database, the K1 fab uses Low-Temperature Polysilicon (LTPS) technology for the TFT array. LTPS technology is used to achieve higher resolution than the conventional TFT LCD technology, which is known as amorphous silicon or a-Si. LTPS fabs have a more complex process which typically consumes at least twice as much floor space for a given throughput. DSCC's capacity database indicates that K1 has capacity of 22,500 substrates per month. Based on the floor space of the Wisconsin site, and considering that the Wisconsin site also includes assembly, DSCC estimates that the capacity of the Wisconsin fab would be 7,500 substrates per month, or 1/3 of K1.

The K1 fab, according to DSCC's understanding, includes TFT Array, Color Filter, and LC Cell processes. K1 does not include LCD Module Assembly nor device assembly. The assembly steps for LCDs which use LC Cells made at K1 are most likely in China. The K1 employment numbers are consistent with the description above – process steps 1 through 3 involve high-technology, capital intensive manufacturing but with few workers.

There are no existing or planned Gen 6 facilities in Asia (or anywhere else in the world) as small as the Wisconsin facility; a facility of such a size would appear to be more of a showcase than a business viable for the long term.

Question 7 – Where would Foxconn Wisconsin obtain glass for making LCDs, and how and where would the glass be finished?

Glass is a critical input for a Liquid Crystal Display (LCD). The production of display glass substrates consists of two main steps: melting/forming and finishing. In the melting/forming stage, the glass composition is mixed from raw materials and the glass is formed into a flat sheet with the appropriate thickness. In the finishing step the glass is cut to the exact size required and the edges are beveled to resist breakage.

The Gen 10.5 factory in the original contract called for Corning to build a glass melting and finishing facility at the Mount Pleasant complex. For a Gen 10.5 fab, it is essential that glass be produced on-site, because the glass substrates are too large to fit in standard shipping containers, making shipping any distance prohibitively expensive. All four of the Gen 10.5 fabs currently running in Asia have glass manufacturing co-located

within the TFT LCD manufacturing complex, and three of those four fabs are supplied by a Corning glass plant on-site.

Corning has repeatedly declared publicly that it will not make new investments in its display glass business unless it receives subsidies from its customers or government entities that amount to 75% of the required investment. For all three of the Gen 10.5 glass plants that Corning is now operating in China, including the plant supplying the Foxconn/SIO Gen 10.5 fab in Guangzhou, Corning has received government and commercial subsidies that have met Corning's required threshold.

In the spring of 2018, it became public knowledge that the state of Wisconsin would not subsidize a Corning glass plant with any additional funds. As a major customer of Corning, Foxconn must have been aware of Corning's investment requirements, which were first declared in December 2015. During the same time frame that they backed out of the Gen 10.5 plans for Wisconsin, Foxconn negotiated a deal with Corning and the local government in Guangzhou, China, for Foxconn's Gen 10.5 fab there, which starts production in Q1 2020. Under that deal, as announced by Corning in June, 2019, more than 75% of the investment in Corning's Gen 10.5 glass plant in Guangzhou will be paid by commercial and government subsidies.

Unlike the Gen 10.5 glass, where an on-site glass melting facility is required because shipping costs would be prohibitive, it would be possible to transport glass from another site to a Gen 6 facility in Wisconsin. Gen 6 glass substrates can fit easily in standard shipping containers.

Corning would be capable of making Gen 6 glass at its facility in Harrodsburg, Kentucky. The Harrodsburg plant includes Corning's fusion draw machines for melting/forming glass substrates in sizes up to Gen 6. However, Harrodsburg has no facility for finishing; currently, all of the production of Harrodsburg is shipped to sites in Asia for finishing. In order for Corning to supply display glass to Foxconn in Wisconsin, Corning would need to build a finishing production line, either in Kentucky or in Wisconsin. This would require an estimated $50-100 million in investment.

There are no other manufacturers of display glass substrates in North America. Foxconn could import display glass substrates from Asia, but in general such long-distance supply is undesirable because it incurs additional costs for shipping and storage and is associated with higher yield loss in manufacturing.

Respectfully submitted,

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