August 30, 2024

Liz Reinhart, Management Analyst
National Institute on Standards and Technology U.S. Department of Commerce
100 Bureau Drive
Gaithersburg, MD 20899

Re: Department of Commerce.
National Institute of Standards and Technology.

Recipient Reporting Information Collection

OMB Control Number: 0693-XXXX.

Notice; request for comment.

Jobs to Move America (JMA) is a strategic policy center that works to transform public spending and corporate behavior using a comprehensive approach that is rooted in racial and economic justice and community organizing. We seek to advance a fair and prosperous economy with good jobs and healthier communities for all.

Our organization envisions a nation where all levels of government use the power of public funds to create public good – fostering conditions for an inclusive democracy, equitable economy, and healthy environment that works for all communities. We seek a just, clean, and worker-centered economy in which corporations are responsible for the impact of their actions. We believe that workers should hold power and space within the economy to shape its growth and direction amidst rapidly evolving conditions.

We are hopeful that the implementation of the CHIPS Act will help revitalize domestic manufacturing and fund important research and development. It is also a test case for our nation's industrial policy, and whether we can create truly good jobs that are equally accessible to members of the communities they are in. At Jobs to Move America, we believe that strong labor standards should be an essential component of the Biden-Harris administration's industrial policy. The CHIPS Act should create good jobs, and racial and gender equity should be centered in the recruitment and hiring process for the projects funded through this legislation.

JMA previously submitted comments on CHIPS Program Office's (CPO) initial request for comment regarding Recipient Reporting Information Collection. We are again submitting comments on how the CPO within the National Institute of Standards and Technology (NIST) can, through the collection and reporting of information, ensure that recipients of CHIPS funding

are making progress toward creating quality jobs, investing in communities, and meeting environmental commitments in a way that limits risk to the project and ensures success. Our comments will focus on the reporting and accessibility of the data related to the workforce development plan, environmental responsibility plan, and community investment components, but we are supportive of detailed reporting and transparency for the other evaluation criteria as well.

We appreciate the opportunity to comment and welcome further opportunities to provide feedback or assistance. We firmly believe that the public and national interests are best served by an industry that pays and treats workers well, is a community and environmental steward, and runs on clean electricity so it consistently contributes to the energy transition.

Transparency & Reporting

CPO and NIST must create accountability and transparency standards around the workforce development commitments. The CPO can determine contractor and subcontractor compliance with plan commitments by requiring regular quarterly reporting. It's crucial that the CPO monitor compliance with plan commitments and be given the authority to access additional information necessary to determine contractor and subcontractor compliance. The reports should include, among other things, the total number of U.S. employee Full Time Equivalent (FTE) work performed in that quarter by job type and demographic information; minimum wages and benefits paid by job title; information for each new person hired during that quarter; and descriptions of workforce development, apprenticeship, and training programs. If any report shows deficiencies in the achievement of commitments, it must include a corrective action plan designed to achieve those commitments.

The CPO should articulate clear monitoring and reporting requirements to applicants in order to assure that implementation will meet stated goals. The monitoring data should be publicly available to ensure credibility and compliance. The CPO has both the authority and obligation to ensure that its investments in accelerating the domestic capacity for semiconductor manufacturing expand workforce development opportunities, provide safe working conditions, and protect the environment.

To complete the foundation of a strong program, the CPO and NIST need to have the ability to impose penalties for non-compliance, or rescind any other benefits the recipient may have earned related to these commitments. The Commercial Fabrication Facilities NOFO provided certain clawback provisions for failure to achieve construction target dates, around technology sharing with foreign entities, and recipient expansion into prohibited foreign countries.[1] We recommend

[1] National Institute of Standards and Technology (NIST). 2023 "Notice of Funding Opportunity: Commercial Fabrication Facilities." February 13, 2023. https://www.nist.gov/chips/notice-funding-opportunity-commercial-fabrication-facilities.

that all funding agreements contain enforceable, transparent language, including monitoring to confirm compliance.

Confidentiality & Transparency

The CPO should make commitments and reporting transparent and publicly available. Communities deserve to know how public funds are being spent, and workers deserve to know what commitments were made about their jobs.[2] Access to that information will enable them to work with the government to hold private companies accountable to the workforce and other job quality commitments they make.

The CPO should regularly monitor the information that companies report. We encourage the CHIPS office to establish a publicly accessible website as a portal for the companies who are the recipients of the CHIPS funding to routinely post their reports in a template developed by the CPO.

Moreover, under the CHIPS & Science Act, information that is not publicly released is exempt from public disclosure under the Freedom of Information Act (FOIA).[3] Therefore unless CPO proactively requires recipients to agree to publicly disclose information, critical information related to workforce, training, chemical and toxic use and exposure, and more will be restricted by the broad FOIA exemption in the CHIPS Act. None of the aforementioned information constitutes a trade secret or a matter of national security, and the disclosure of this information will greatly promote the public interest and the intent and purpose of the CHIPS and Science Act.

Standardization of Specific Reporting Requirements

We appreciate that CPO's Commercial Fabrication Facilities NOFO notes that CHIPS recipients report no less than semi-annually and agree that regular reporting is key to evaluating the success of projects.[4]

In the draft Supporting Statement to CFR Part B the CPO noted that "reporting requirements for each awardee will be tailored to the award (and agreed to by the recipient), serving to further limit instances of non-response."[5] There should be certain standardizations of mandatory reporting requirements as opposed to tailoring reporting requirements to each awardee. It is not

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[2] National Institute of Standards and Technology (NIST). 2023 "Notice of Funding Opportunity: Commercial Fabrication Facilities."

[3] CHIPS & Science Act. Section SEC. 10253. NATIONAL SUPPLY CHAIN DATABASE. § §105(i)(1)

[4] NIST. 2023."Notice of Funding Opportunity: Commercial Fabrication Facilities."

[5] DRAFT Statement B - Recipient Reporting.

acceptable for some awardees to be allowed to report on little while others are required to provide detailed reports. Instead, by standardizing reporting requirements, as described below, the CPO can properly assess the overall success of the program.

Workforce Reporting Information Collection

To ensure the CPO is successful in achieving program goals, the office should monitor workforce metrics and milestones and health and safety compliance. It is essential to collect the following basic information from each company, when they sign the CHIPS contract, in order to establish a baseline from which to determine whether the CHIPS program is truly creating good manufacturing jobs accessible to all who need them:

1. Describe the number and location of U.S. jobs they will create or support. It's important to know the location of the jobs since we understand many semiconductor jobs can be done remotely and therefore will not provide an economic benefit for the targeted geography.

2. Detail the minimum wages and benefits they will pay for each job title on the project. Pay can vary greatly among different job titles; while the semiconductor industry claims that it provides high-paying jobs, the U.S. Bureau of Labor Statistics reports a median hourly wage for processing technicians of $21.49, with the lowest 10th percentile earning just $15.92 per hour (annual earnings of $44,690 and $33,120, respectively).[6] Requiring companies to report minimum wages and not just averages provides insight into what the lowest-paid workers are making, while average pay can be skewed by the highest earners – the Semiconductor Industry Association uses $170,000 annual pay as the average for the industry.[7]

3. Commit and describe their plans for recruiting, hiring, and training workers who face multiple and significant barriers to employment, or workers who are typically underrepresented in the manufacturing workforce. Examples of targeted hiring could include women, people of color, veterans, formerly incarcerated individuals, people who live in rural areas, workers who reside in low-income census tracts, and workers formerly engaged in providing carbon-intensive goods and services.

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[6] Bureau of Labor Statistics (BLS). 2022. "Occupational Employment and Wages." May 2022. https://www.bls.gov/oes/current/oes519141.html.

[7] Semiconductor Industry Association (SIA). 2022. "The US Semiconductor Industry Workforce." Accessed August 22, 2024).

https://www.semiconductors.org/wp-content/uploads/2022/02/The-US-Semiconductor-Industry-Workforce.pdf.

Once companies have established their baseline commitments in the contract, CPO must monitor them to ensure they are being achieved. It is difficult to tell from this PRA submission what specifically CPO intends to monitor. According to The CHIPS & Science Act Section 105, under GAO Reporting Requirements, the CPO to the extent possible must report analysis of "aggregated workforce data, including data by race or ethnicity, sex, and job categories."[8]

We found that the best way to ensure that contractual commitments are followed is to require regular quarterly reports from companies regarding compliance with the plan commitments. These reports should include, among other things, total U.S. employee Full Time Equivalent (FTE) work performed in that quarter by job type and demographic information; minimum wages and benefits paid by job title and demographics; information for each new person hired during that quarter; and descriptions of workforce development, apprenticeship, and training programs.[9]

In addition to the reporting of commitments made as part of workforce development plans, recipients should also report on federal- or state-mandated administrative and national policy requirements. The NOFO lists multiple administrative requirements, including workforce related ones like adhering to prevailing wages for laborers and mechanics under the Davis-Bacon Act, and compliance with federal employment and labor laws (including but not limited to the Civil Rights Act, Fair Labor Standards Act, Occupational Safety and Health Act and the National Labor Relations Act). Recipients should be required to include in their CHIPS Act reports any reports required under those statutes (such as firm level EEO-1 Component reports and OSHA 300 logs), and report any violations and their overall compliance with all federal employment and labor laws.

Lastly, to complete the foundation of strong workforce development programs, CPO and NIST should impose penalties for non-compliance or rescind any other benefits the recipient may have earned related to these commitments. The NOFO provides clawback provisions for failure to achieve construction target dates, around technology sharing with foreign entities, and recipient expansion into prohibited foreign countries.[10] While the NOFO requires all recipients to comply with any reporting requirements, we urge similar penalties for non-compliance with contractual commitments.

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[8]Department of Commerce. 2022. CHIPS & Science Act. Division A Section §105(a)(2)(D)(iii). Pg.27; NIST. 2023. "Notice of Funding Opportunity: Commercial Fabrication Facilities."

[9] Jobs to Move America (JMA). 2020. "U.S. Employment Plan." April 10, 2020. https://jobstomoveamerica.org/resource/u-s-employment-plan-2/.

[10] National Institute of Standards and Technology (NIST). 2023 "Notice of Funding Opportunity: Commercial Fabrication Facilities."

The CHIPS Act represents a potentially huge win for workers and their communities. However, to ensure that the hundreds of thousands of construction and operations jobs created by CHIPS funding opportunities are good jobs, CPO and NIST should institute robust and transparent reporting with the appropriate compliance mechanisms.

Community Investments Reporting Information Collection

We appreciate the CPO's emphasis on building resilient local economies by requiring applicants to make community investments and identify areas within their regional economies that require investments to ultimately help strengthen the economy under the Commercial Fabrication Facilities Funding NOFO.[11]

We encourage CPO to require grantees to commit to milestones in their final contracts, to publicly report on outcomes, to provide community benefits (such as affordable housing, public transportation, and local investments in secondary and post-secondary education), protect community health, develop renewable energy infrastructure, and provide workforce development opportunities for historically marginalized community members. Opportunities such as these can be provided and enforced through Community Benefits Agreements (CBAs) between impacted communities and CHIPS grantees. Like job commitments, community investments, whether provisioned as part of a CBA or not, should be monitored, and reporting on them should be made publicly available. Because they directly involve impacted communities in their negotiation and enforcement, we believe robust CBAs are the best way for companies to comply with 15 U.S. Code § 4652, which requires recipients of CHIPS and Science Act funding to invest in surrounding host communities.

Environmental Reporting Information Collection

We appreciate the CPO's interest in creating a sustainable domestic semiconductor industry. Sustainability goals are particularly important in the semiconductor industry which, despite branding itself as a clean industry, poses significant environmental and safety concerns. Microchip manufacturing uses enormous amounts of water, makes a huge carbon footprint, and produces toxic waste.

Addressing the potential impact that semiconductor facilities have on workers, the community, and the local environment is crucial. Microchip manufacturers have a history of environmental and health issues including extremely high water consumption in drought-stricken areas,[12] issues

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[11] NIST. 2023. "Notice of Funding Opportunity: Commercial Fabrication Facilities."

[12] Govindan, Prakash. 2022. "Water's Critical Role in Semiconductor Manufacturing." *Industry Today*. January 18, 2022. https://industrytoday.com/waters-critical-role-in-semiconductor-manufacturing/; Calma, Justine. 2021. "Water shortages loom over future semiconductor fabs in Arizona." *The Verge*. August, 18, 2021. https://www.theverge.com/22628925/water-semiconductor-shortage-arizona-drought; Yang, Stephanie. 2021. "The

related to water runoff and toxic waste exposure in communities,[13] massive electricity consumption that can put pressure on local power grids,[14] and semiconductor manufacturers' overall carbon footprint.[15] The CPO should ensure that recipient reporting information collection evaluates recipients' impact on the environment and their ability to limit worker and community exposure to PFAS and other toxic chemicals.

Chemicals & Hazards

Semiconductor manufacturing is highly dependent on the use of thousands of hazardous chemicals, including PFAS, with little regulatory oversight in the US and less so globally.[16] Among the 81 most commonly used chemicals in electronics manufacturing, 30 are known carcinogens, 40 are mutagens, 45 are reproductive toxins, and many have never been evaluated for their health effects.[17] Permissible workplace toxic exposure limits can be more than 1,000 times higher than what the bio-medical research says is safe.[18] In the US and abroad, semiconductor manufacturing has exposed women of child-bearing age to thousands of workplace toxins, resulting in miscarriages, birth defects, cancer, and chronic illness.[19]

Chip Shortage Is Bad. Taiwan's Drought Threatens to Make It Worse." *Wall Street Journal*. April 16, 2021. https://www.wsj.com/articles/the-chip-shortage-is-bad-taiwans-drought-threatens-to-make-it-worse-11618565400; Southwest Organizing Project. "Intel Inside New Mexico: A Case Study of Environmental Economic Injustice" 1995.

[13] Smith, Ted. 2015."Hazardous from inception The US electronics industry has dealt with many hazardous chemical-related incidents over the years but is this pattern now emerging in Asia?" *Chemical Watch*, December 2015.

[14] Stand.Earth. 2024. "Clean Clicks or Dirty Chips?" February 2024. https://stand.earth/wp-content/uploads/2024/02/Clean-Clicks-or-Dirty-Chips-Feb-2024_230224.pdf.

[15] Crawford, Alan; King, Ian; Wu, Debby. 2021. "The Chip Industry Has a Problem With Its Giant Carbon Footprint." *Bloomberg*. April 8, 2021. https://www.bloomberg.com/news/articles/2021-04-08/the-chip-industry-has-a-problem-with-its-giant-carbon-footprint#xj4y7vzkg.

[16] SIA PFAS Consortium. 2023. "The Impact of a Potential PFAS Restriction on the Semiconductor Sector. " SIA PFAS Consortium." April 13, 2023.

[17] This data was originally developed by researchers at Northwestern University, later augmented by researchers at Greenpeace International, and then incorporated into the PHAROS Project.

[18] Taube, Ruth Silver. 2023. "Silver Taube: OSHA's limits for toxic exposure cause preventable harm to Silicon Valley workers." *San Jose Spotlight*. May 11, 2023.

[19] Kim MH, Kim H, Paek D. The health impacts of semiconductor production: an epidemiologic review. Int J Occup Environ Health. 2014 Apr-Jun;20(2):95-114.

We strongly recommend that the CPO require recipients to transparently report the chemicals used in their manufacturing process. Manufacturers should not be able to refuse to identify or disclose chemicals by claiming the information is proprietary.[20] When harmful chemicals, toxics, and hazards are used, it is crucial that workers and the community are made aware. The CPO should require recipients to identify and report the chemicals used in their manufacturing and R&D processes including working with chemical suppliers to fully disclose the list of chemicals in use. Publicly reporting on chemicals and hazards can ensure that CPO, workers, and communities understand how to protect their health and safety from any long-term exposure to toxic chemicals.

The CPO should require CHIPS recipients to report information in advance by disclosing the following in their final contracts. This upfront transparency will be in line with Commercial Fabrication Facilities NOFO which notes that applicants should submit sustainability transparency plans that provide "A description of the metrics and processes the applicant will use to measure, track, and report publicly on its climate and environmental responsibility goals and commitments."[21]

- Recipients should disclose in their final contracts with the CPO the steps they will take to treat and purify the water supply they will use before it is introduced into their facility;
- Recipients should disclose in advance all toxic, hazardous, or radioactive substances that are used or produced by the facilities with their CAS ID and their chemical storage and transfer operations and infrastructure in their final contracts. Reporting should include quantitative ranges and where feasible, the hazardous substances contained in commercial chemicals. At a minimum, these should include those for which there are state or EPA drinking water standards or health advisories, those listed in U.S. EPA's Toxics Release Inventory, and those listed in California's Prop 65. All PFAS should be listed, whether or not they are contained on the above lists. Additionally, recipients should report any changes to the type, amount, and containment methods of these substances as part of regular reporting;
- Recipients should report and describe the types and volumes of hazardous process gasses (such as arsine, phosphine, etc.) that they use at their facility on a daily, monthly, and

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[20] Simpson, Cam. 2017. "American Chipmakers Had a Toxic Problem. Then They Outsourced it." *Bloomberg* June 15, 2017. https://www.bloomberg.com/news/features/2017-06-15/american-chipmakers-had-a-toxic-problem-so-they-outsourced-it.

[21] NIST. 2023. "Notice of Funding Opportunity: Commercial Fabrication Facilities."

annual basis. For each such gas, describe in detail how each gas will be transported to the facility and from where - the amount, the route, and the frequency of each shipment;

- In their final contract, they should disclose an analysis of the proximity to existing or anticipated residential neighborhoods for transportation routes;
- In their final contract recipients should disclose each of the hazardous air pollutants that they anticipate discharging from the facility by name, CAS number, and volume;
- Report on the use of new technologies and the relative toxicity of these technologies before they are introduced into the manufacturing process and report the steps that will be taken to replace hazardous substances with safer alternatives. Report what protocols recipients will use to measure and monitor occupational exposure to each of the chemicals listed. Moreover, manufacturers should disclose these results to the workers.

The CPO should require CHIPS recipients to regularly report the following after they have been awarded the funding:

- The wastewater effluents for each waste stream;
- Report each of the hazardous air pollutants that they discharge from the facility by name, CAS number, and volume;
- Report the fugitive emissions per day and year;
- Regularly monitor and report all of the air emissions from their facilities.

Greenhouse Gas Emissions

The CHIPS Incentives Program Commercial Fabrication Facilities NOFO notes that applicants are expected to design projects to mitigate climate impacts. In particular, each applicant must submit a climate and environmental responsibility plan. Projects constructing new facilities are encouraged to use 100% renewable energy in projects or create plans to transition to this goal and are encouraged to describe their strategies for mitigating community adverse environmental impacts on the community. Applicants should also demonstrate that they have planned and accounted for future climate risks.[22] We are happy to see that sustainability plans are included in the CHIPS funding application process. We strongly urge the CPO to evaluate the recipient's progress in meeting sustainability plan milestones and to publicly and regularly report on these outcomes.

In particular, CPO should require and incentivize recipients to reduce GHG emissions by setting milestones for reducing emissions upon which recipients can regularly publicly report their

[22] NIST. 2023. "Notice of Funding Opportunity: Commercial Fabrication Facilities."

progress in meeting those goals. These evaluations should be publicly disclosed so that the impacted public understands the impact that the companies may have on their community.

We appreciate the opportunity to comment and welcome further opportunities to provide feedback or assistance. Our sentiments for stronger reporting and transparency requirements were recently echoed by House and Senate labor leaders in a Congressional Labor Caucus letter [23] and a Senate letter to Secretary Gina Raimondo, in which congressional leaders encouraged strong, publicly transparent reporting on worker health and safety, protecting workers' right to organize, wage and benefit standards, renewable energy commitments, and use of chemicals.[24] We firmly believe that the public and national interests are best served by an industry that pays and treats workers well, is a community and environmental steward, and runs on clean electricity so it faithfully and consistently contributes to the energy transition.

Sincerely,

Jobs to Move America

[23] Congressional labor Caucus. 2024. "Congressional Labor Caucus Urges Commerce to Prioritize Labor Standards for CHIPS Implementation." February 29, 2024.

[24] United States Senate. 2024. "US Senate Letter to DOC on CHIPS Grants." August 7, 2024.