



Incentives for Economic Development via Clean Energy, Clean Energy Supply Chains, and USDA Conservation Programs



Pete Wyckoff | Assistant Commissioner
Minnesota Department of Commerce Division of Energy Resources

Minnesota has big climate plans (and big climate LAWS)



Backed up by big investments

- Buy Clean, Buy Fair Minnesota
- 100% Carbon-Free Electricity by 2040
- Sustainable Building Guidelines Modifications
- Preference Order for Purchase of State Vehicles
- RDA Projects Subject to Prevailing Wage/Diversity Report
- Solar Reward Expansion
- Air Ventilation Program Act
- Auto dealers must employ personnel with knowledgeable of electric vehicles
- Utility Reporting Due Date Modification
- Repeal/Reinstatement of Intervenor Compensation Statute
- Electric Vehicle Deployment Program
- **Strengthen MN Homes**
- Customer's Access to Electricity Usage Data
- Transportation Electrification Plan
- Community Solar Garden Modifications
- Prairie Island Nuclear Power Plan Settlement Payments
- Distributed Solar Energy Standard
- Energy Storage Systems Deployment Target
- Utility Customer Dispute Resolution
- Definition of Low-Income Household
- Approval of Projects to Modernize Transmission and Distribution System
- Large Wind Energy Conversion System Certification of Need Exemption
- Modification of Threshold Requiring PUC Approval
- Commerce's Assessment Increase
- Compensation for Certain PUC Proceeding Participants
- **State Competitiveness Fund**
- State Competitiveness Fund 2.0
- **Climate Innovation Finance Authority**
- Commissioner authority to administrator Solar for Schools Program
- **Pre-weatherization and Workforce Training Program**
- Energy Benchmarking
- Electric School Bus Deployment Program
- Solar for School Modifications from Xcel to Commerce Department
- Solar on Public Building Program Establishment
- Energy Storage Incentive Program
- Distribute Energy Resources System Upgrade Program
- Electric Vehicle Rebates
- Dealers Grants to Cover cost manufacturer certification
- PACE Loan Program
- **Residential Electrical Panel Upgrade Grant Program**
- **Residential Heat Pump Rebate Program**
- Public Utility Diversity Reporting
- Energy Storage System Definition
- Conforming Changes to definition of large energy power facilities and site permit
- Gas and Hazardous Liquid Definitions Changes
- Greenhouse Gas Emission Reduction Goal Modifications
- Modification to Annual Report on Telecommunications Access Program
- Restriction on single family solar installations prohibited
- Extension of Sunset on Gas Utility Recovery of Infrastructure Costs

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News Environment

Minnesota Legislature passes energy bill with \$2,500 EV rebates, 'pre-weatherization'

The spending follows two other consequential energy bills adopted earlier in the legislative session: a law requiring a carbon-free electric grid by 2040 and a \$115 million fund to match federal dollars for climate and energy projects in Minnesota.

By [Walker Orenstein](#) | Staff Writer

Politics and Government
State lawmakers agree to 'historic' environment and climate bill
Dan Kraker Duluth May 18, 2023 5:30 AM

Gov. Walz, leaders celebrate climate action legislation that passed this session
By WJOL May 31, 2023 - 4:43 PM

MN Joins 'Matching-Funds Game' for Clean-Energy Projects
Moen • Apr 21

3 ways Minnesota is crushing it on climate action
CANARY MEDIA

49
Maria Gall

Minnesota has big climate plans

The Federal Government is here to help
(honest)

For instance, they sent me....


Inside Climate News

Politics & Policy

Behind the Scenes in the Senate, This Scientist Never Gave Up on Passing the Inflation Reduction Act. Now He's Come Home to Minnesota

Pete Wyckoff went from teaching college to staffing a U.S. senator, and he played a key role in the largest climate legislation in the country's history.



By Dan Gearino 
August 16, 2023



Federal Investments



Infrastructure Investment & Jobs Act (IIJA)

Also known as:
The Bipartisan Infrastructure Law (BIL)



Inflation Reduction Act (IRA)

And the
CHIPS and Science Act

Infrastructure Investment & Jobs Act (IIJA)



- Clean School Bus program (\$5 billion)
- \$5 Billion for EV Chargers (NEVI program)
- Research Hubs/ Demonstration Projects (\$21.5 billion)
 - *Minnesota part of \$925 Hydrogen Hub Grant*
- \$11 billion in resilience grants for electric sector
 - *\$614 million in grants to Commerce and MN Utilities*

These are hard to get! 7% award rate for competitive

Inflation Reduction Act of 2022 (IRA)



The Biggest Climate Action Law

Ever

Anywhere in the World



The IRA ...135 distinct programs and tax credits

Grants = \$110 billion (capped)

- 70% in review or awarded (Dec. 23)

Clean energy loans ~ \$500 billion (capped)

Tax Credits ~ \$700 billion to \$1.2 trillion (uncapped, estimated)

- “Direct Pay” for local governments, Tribes, and non-profits

Unlocking Federal Funds

Commerce: State Competitiveness Fund

Grants to develop grant writing capacity \$ 6,000,000

State grants to leverage Federal grants \$ 100,000,000

State grants to leverage Federal tax credits and loans \$ 75,000,000

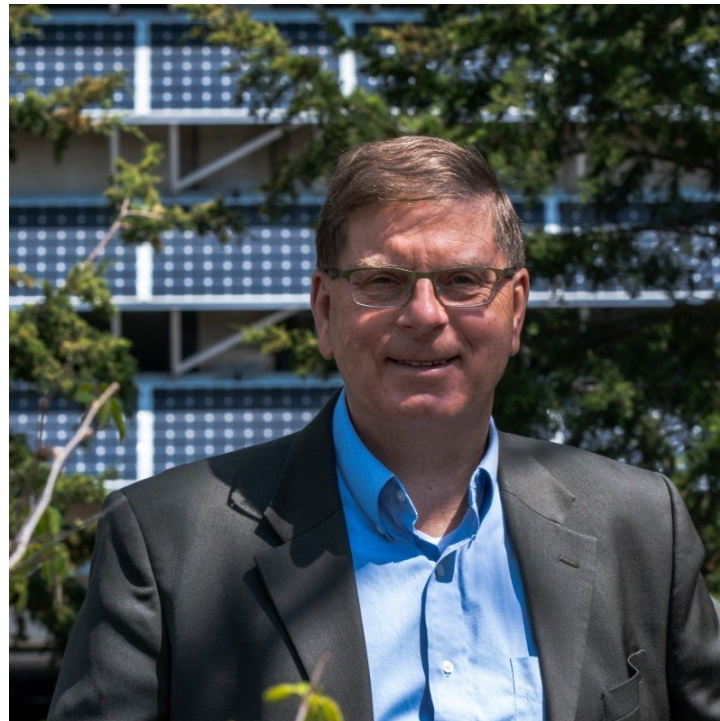
DEED: FORWARD Fund

\$400,000,000

Climate Investment Finance Authority

Climate Investment Finance Authority: a new Minnesota "Green Bank". (SF3035, Article 21, section 2)

\$ 45,000,000



IRA Grants (\$110 billion)



PROGRAM	AGENCY	BUREAU	FUNDING AMOUNT	FUNDING MECHANISM
+ Greenhouse Gas Reduction Fund - National Clean Investment Fund	Environmental Protection Agency	Office of the Administrator	\$14,000,000,000	Competitive grants
+ Empowering Rural America (New ERA)	Department of Agriculture	Rural Utilities Service	\$9,700,000,000	Loans, modifications of loans, the cost of loans and modifications, and other financial assistance (including grants)
+ Environmental Quality Incentives Program (EQIP)	Department of Agriculture	Natural Resources Conservation Service	\$8,450,000,000	Cooperative Agreements, Grants, Contracts
+ Greenhouse Gas Reduction Fund - Solar for All Program	Environmental Protection Agency	Office of the Administrator	\$7,000,000,000	Competitive grants
+ Greenhouse Gas Reduction Fund - Clean Communities Investment Accelerator	Environmental Protection Agency	Office of the Administrator	\$6,000,000,000	Competitive grants
+ Advanced Industrial Facilities Deployment Program	Department of Energy	Office of Manufacturing and Energy Supply Chains, Office of Clean Energy Demonstrations	\$5,812,000,000	Grants, Rebates, and/or Cooperative Agreements
+ Energy Infrastructure Reinvestment Financing	Department of Energy	Loan Programs Office	\$5,000,000,000	Loan Guarantees
+ Regional Conservation Partnership Program (RCPP)	Department of Agriculture	Natural Resources Conservation Service	\$4,950,000,000	Cooperative Agreements, Grants, Contracts
+ Climate Pollution Reduction Grants: Implementation Grants	Environmental Protection Agency	Office of Air and Radiation	\$4,750,000,000	Grants, cooperative agreements
+ High-Efficiency Electric Home Rebate Program	Department of Energy	Office of State and Community Energy Programs	\$4,500,000,000	Grants

MIDWEST

Minnesota electric co-ops seek \$970M in federal clean energy funds

A consortium of rural electric cooperatives organized by Great River Energy is preparing a massive joint application for funding under the Empowering Rural America program.



by Frank Jossi
August 9, 2023



mn.



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IRA Loans (\$500 billion)

Joe Biden's \$400 Billion Man

Jigar Shah, who runs the Energy Department's loan program, is trying to hand out a lot of money for green-technology projects, while navigating an unforgiving political environment

Scott Patterson [Follow](#) and Amrith Ramkumar [Follow](#)

Updated July 3, 2023 12:05 am ET



 **Minnesota's Electric Cooperatives** @MNRuralElectric · Jul 25 ...
MREA was excited to help host @JigarShahDC from @ENERGY along with @LIUNAMinnesota! Co-op innovation along with federal support is fueling reliable, affordable clean energy for the 1.7 million Minnesotans served by co-ops. Teamwork makes us stronger! #Energy #CooperativePower



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IRA funds increases DOE Loan Authority

1) Innovative Clean Energy Loan Guarantees (\$80 billion)

- “Innovative” Requirement waived if a State Green Bank also contributes to a project

2) Energy Infrastructure Reinvestment Program (\$250 billion)

- Support utilities in transition to clean

3) Advanced Vehicle Manufacturing (\$40 billion)

4) Tribal Energy Loan Guarantee Program (\$20 billion)

5) CO₂ transportation infrastructure (\$20 billion)



Lots of loans in process



Monthly Application Activity Report

February 2024

203

ACTIVE APPLICATIONS¹

\$261.8

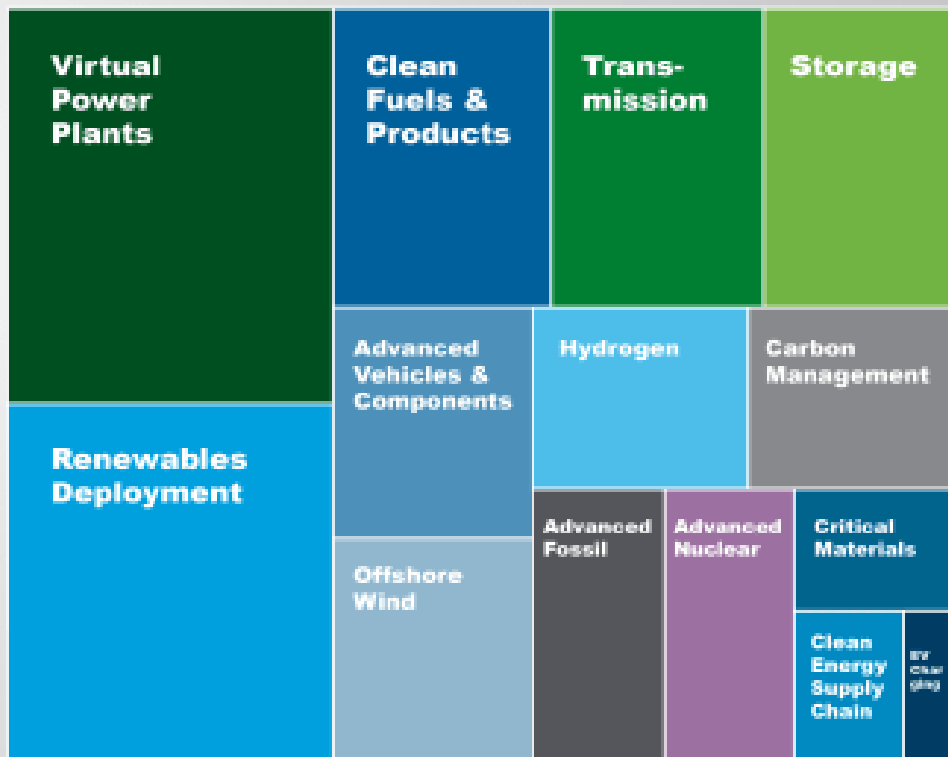
BILLION IN LOANS REQUESTED²

1.8

NEW APPLICATIONS PER WEEK³

\$261.8 BILLION

CURRENT AMOUNT OF LOANS REQUESTED BROKEN DOWN BY PROJECT TECHNOLOGY SECTORS

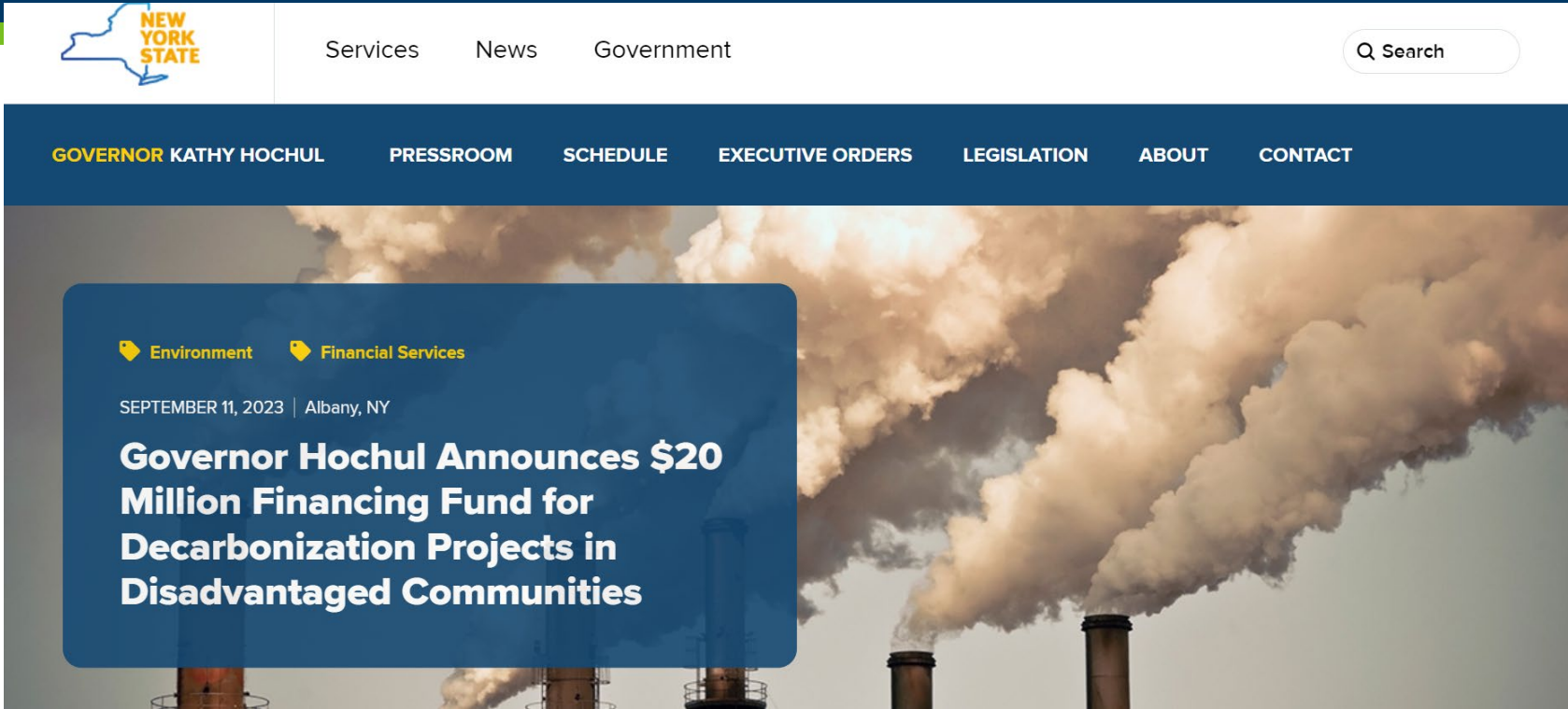


Notes

All data updated through February 29, 2024. For more details and a list of technology areas of interest within each LPO tech sector, see: [Energy.gov/LPO/MAAR](https://energy.gov/LPO/MAAR)

- 1) Active applications include applications that have been submitted by the project sponsor(s) through LPO's online application portal and are in different stages of active review and engagement by LPO and the applicant.
- 2) Individual requested loan amounts are estimated and potential, subject to change, and not necessarily representative of final financing terms. Requested loan amounts in current active applications do not affect available LPO loan authority. Figure rounded down to the nearest \$0.1 billion.
- 3) Current rolling average of new active applications per week over the previous 24 weeks. Figure rounded down to the nearest 0.1 application per week.

LPO can work with State Green Banks



MNCIFA will follow New York, New Jersey, Michigan, and Illinois in issuing and RFI for investments to be jointly supported by MNCIFA/ DOE LPO

Priority areas for potential joint investments by MNCIFA/ DOE LPO

- Decarbonization of existing buildings
- Transportation pollution reduction
- Emission reduction technologies for industry and agriculture
- Distributed power generation and storage

- Maximum DOE investment = 80%; Minimum MNCIFA investment ~1%
 - Coinvest with other gov entities, banks, private companies, philanthropies

Tax Credits (\$700 Billion - \$1.2 Trillion, uncapped)

The Federal Government has a history of tax credits to encourage renewable energy deployment



Wind Production
Tax Credit (PTC)
since 1992



Solar Investment
Tax Credit (ITC)
since 2006

Expanded Tax Credits

Tax credit provisions incentivize low- & no-carbon electricity

- ITC and PTC are back, stronger than ever– workhorses of the IRA
- Existing eligibility for PTC (wind) and ITC (solar) now broadened to allow both to use either tax credit
- Stand-alone energy storage projects can receive the ITC
- Expanded to include geothermal, fuel cells, biomass, landfill gas, hydropower, combined heat and power

IRA added tax credits for additional energy technologies:

- nuclear
- fossil fuels utilizing carbon capture and storage
- clean hydrogen
- advanced biofuels
- sustainable aviation fuel

IRA added tax credits transportation:

- *Individuals: New Electric Vehicles (EVs)*
- *Individuals: Used EVs*
- Commercial and Fleet Clean Vehicles
- Clean refueling equipment/ EV chargers

Tax Credits for Supply Chain and Manufacturing

Tax Credits for domestic manufacturing



Tax Credits for Industrial Supply Chain

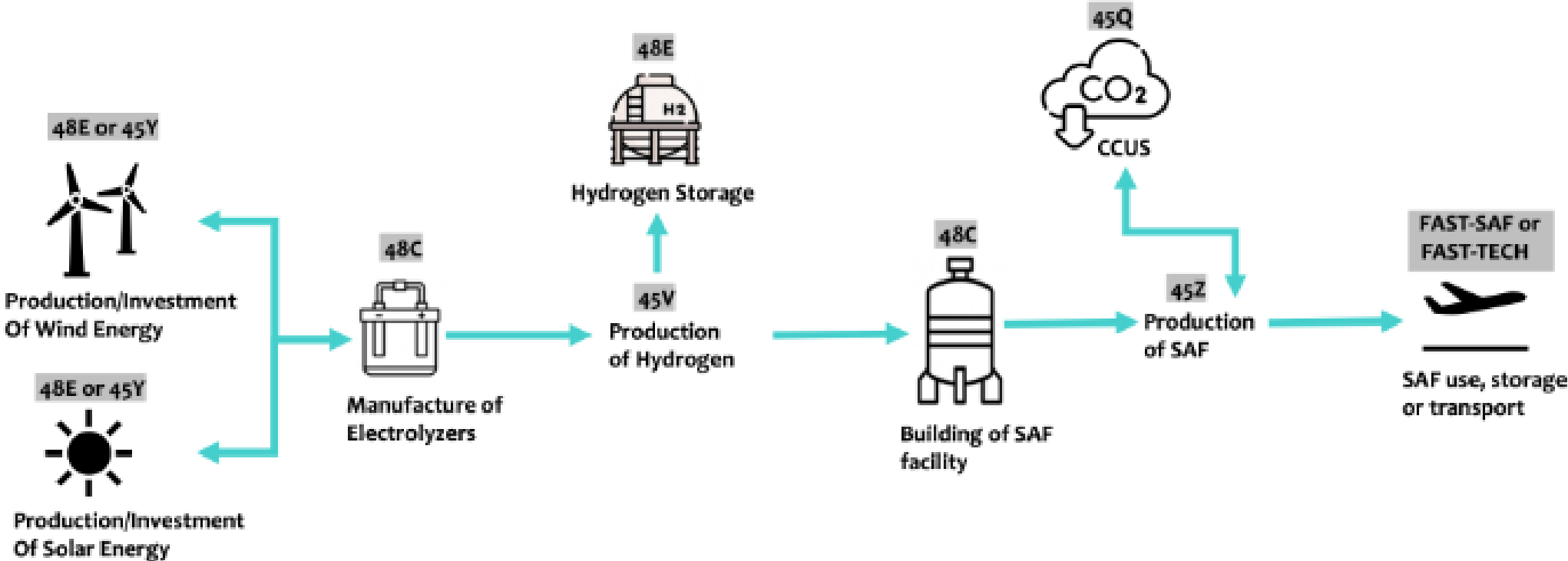


Advanced Energy Project Credit (48C)--
manufacturing

Clean Hydrogen Tax Credit (45V)– most lucrative for
Green Hydrogen (uncapped)

Carbon Capture and Sequestration Tax Credit (45Q)–
(uncapped)

Exhibit 1: IRA incentives along the sustainable aviation fuel (SAF) supply chain.



Direct Pay Provisions

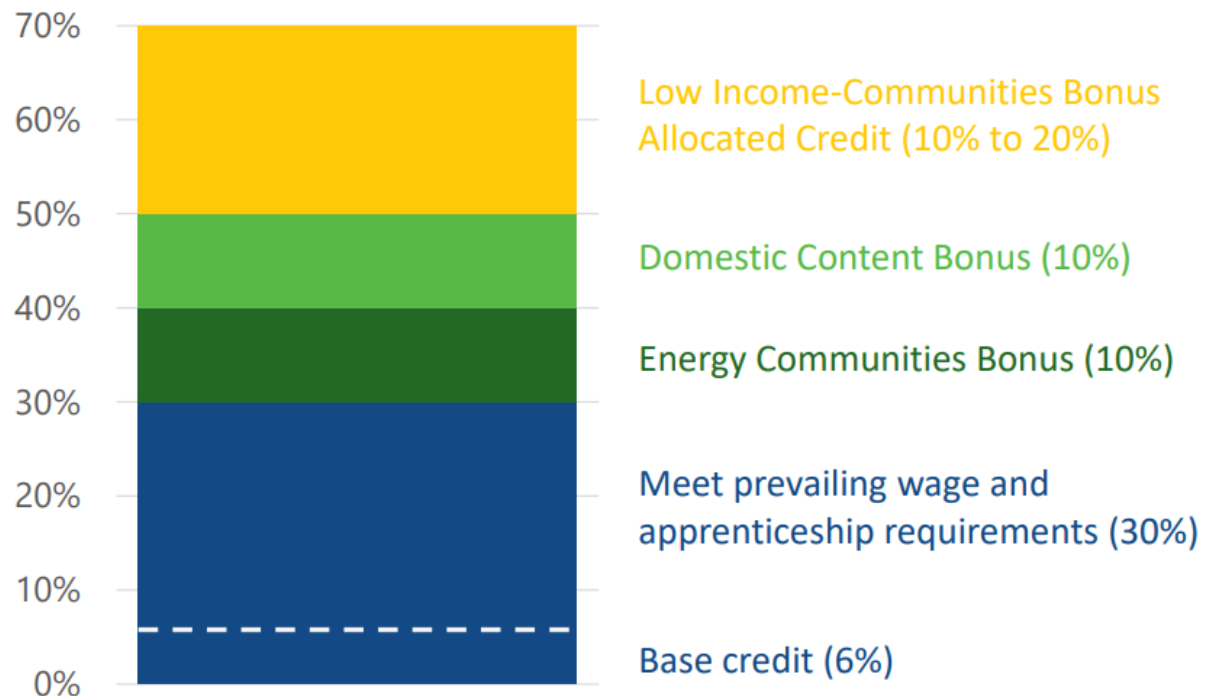
“Direct pay” allows tax-exempt entities to capture tax benefits

- States
- Cities, Counties, Townships
- Tribal Nations
- Non-profits
- Faith Communities
- Cooperative and Municipal Utilities
- Other governmental entities

Tax Credit Adders & Stacking

Clean Energy Layer Cake

Total Investment Tax Credit



A hypothetical 1 MW community solar facility costing \$1 million could earn a **70% tax credit** worth \$700,000

If it is owned by a tax-exempt entity, this could be a **direct cash payment** from the IRS

Applies to clean electricity investment and production tax credits, available till at least 2032

Slide Credit:
Paul
Donohoo-
Vallet,
US DOE

The background of the slide is a repeating pattern of colorful speech bubbles, each containing a question mark. The colors include red, yellow, pink, white, and light blue. The bubbles are scattered across the top half of the slide. The bottom half of the slide has a dark blue background with a faint, larger-scale version of the same speech bubble pattern.

Questions?

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