

Climate-Smart Food System Award

Inflation Reduction Act - Climate Pollution Reduction Grant

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Frank Kohlasch, Minnesota Pollution Control Agency



 OUR MINNESOTA CLIMATE



Minnesota Climate-Smart Food Systems grant award

Nearly \$200 million

- Catalyze a transition toward a sustainable, equitable, resilient, and decarbonized food system
- Advance economic opportunity
- Fight hunger
- Reduce air and water pollution
- Support the health and wellbeing of all Minnesotans and future generations

About the grant

Competitively awarded by EPA with
Inflation Reduction Act funding

Led by MPCA, with subawards to:

- Four state agencies (Agriculture, Health, Natural Resources, Board of Water and Soil Resources)
- Tribal governments
- Ramsey/Washington Recycling and Energy

Informed by engagement in 2023 and 2024



Work areas

Funds will be distributed via new and existing programs in seven work areas across the food system:

Lands and production

- Peatland restoration
- Climate-smart agricultural practices

Processing, transportation, and storage

- Industrial innovation
- Refrigerant replacement
- Vehicle and equipment replacement

Vibrant food economies

- Food scraps management and prevention of wasted food
- Tribal food sovereignty and local food systems decarbonization





Peatland restoration

\$20 million

Restore over 10,000 acres of peatlands originally drained for agriculture

Expands restoration programs at the Minnesota Department of Natural Resources (\$12M)

Of the DNR subaward, \$4M is reserved for restoration on Tribal lands

Expands restoration and easement programs at the Board of Water and Soil Resources (\$8M)

Climate-smart agricultural practices

\$20 million

Support farmers adopting practices such as use of controlled-release fertilizers, transition from row crops to perennials, and no-till farming

Scales up existing programs at the Minnesota Department of Agriculture:

- Minnesota Agricultural Water Quality Certification Program (\$9.9M)
- Soil Health Financial Assistance program (\$8.8M)
- Continuous Living Cover Market Development Grants program (\$0.5M)



Refrigerant replacement

\$10 million

Replace coolers in supermarkets, schools, small businesses, and other locations with more climate-friendly refrigeration

Scales up the existing refrigerant replacement grant program at the Minnesota Pollution Control Agency





Vehicle and equipment replacement

\$20 million

Replace vehicles and equipment we use to grow and transport food with those with cleaner fuels

Scales up the existing vehicle replacement grant program at Minnesota Pollution Control Agency (\$12.5M)

Establishes a new equipment replacement grant program at the Minnesota Department of Agriculture (\$7.5M)



Food scraps management and prevention of wasted food

\$33.4 million

Keep valuable nutrients in circulation to feed people, livestock, and soil and prevent significant methane emissions

Scales up existing programs at the Minnesota Pollution Control Agency:

- Prevention of wasted food and food rescue grants (\$12.5M)
- Organics management grants (\$16M)
- Revolving loan fund for organics management projects (\$2M)
- Food-to-livestock grants (\$0.4M)

Tribal food sovereignty and local food system decarbonization, part 1

\$34.6 million

Improve food security, expand Tribal and local food economies, strengthen food sovereignty, and reduce climate pollution in Tribal and local food systems

Administered through a partnership between the Minnesota Department of Health and Minnesota Pollution Control Agency

Tribal food sovereignty and food system decarbonization

Distributes funds to Tribes for food system projects that reduce greenhouse gas emissions (\$15M)





Tribal food sovereignty and local food system decarbonization, part 2

Local food system decarbonization grants

Establishes a new grant program for local food system projects statewide (\$15M)

Assesses opportunities and identifies community-driven, equitable solutions through the creation of Regional Food Networks



Industrial innovation

\$60 million

Cut climate pollution, improve efficiency, and reduce waste at food and organic waste processing sites

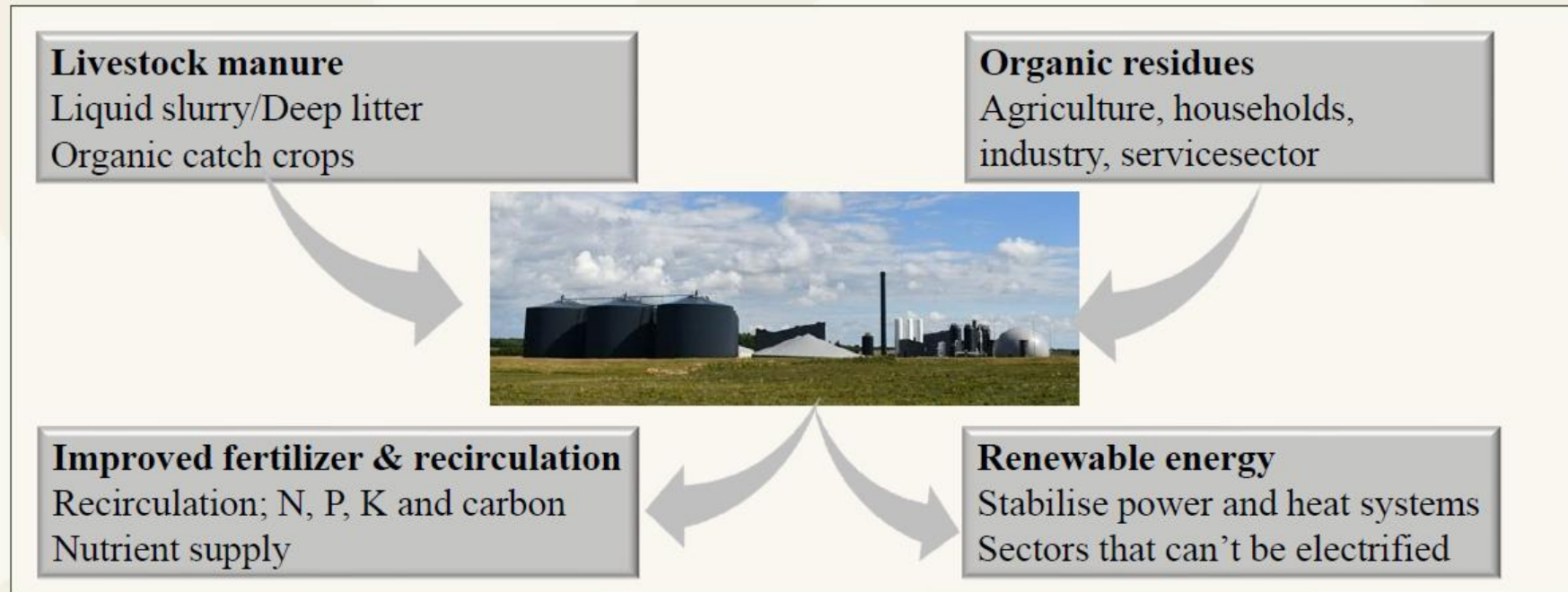
Establishes a new industrial grant program at the Minnesota Pollution Control Agency (\$50M)

Grant program funds planning and implementation of various technologies toward zero waste and zero emissions

Subaward to Ramsey and Washington Counties for organics recycling (\$10M)

Danish Biogas Model

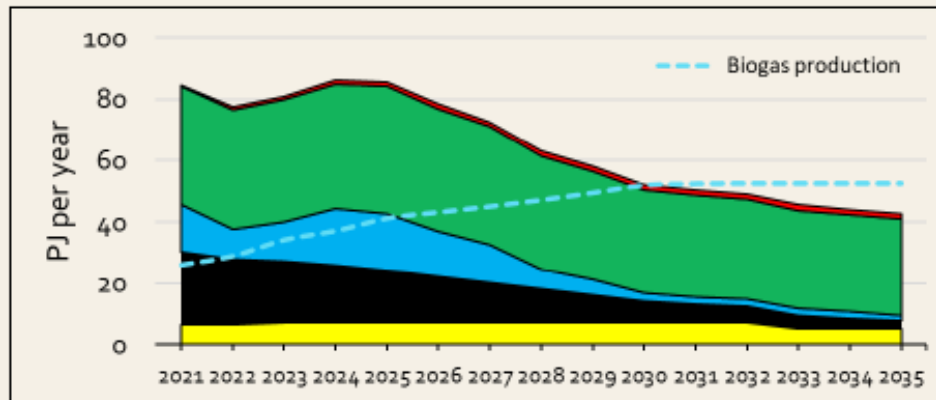
Sustainable agriculture and security of supply of renewable gas based on residues



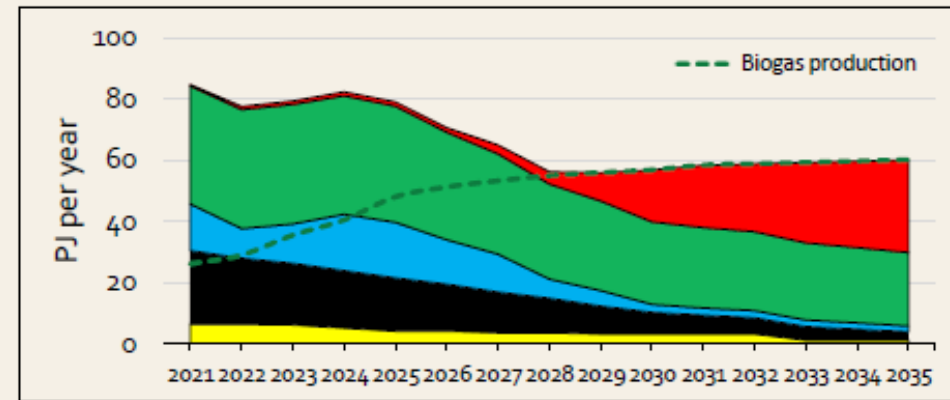
Towards 100 per cent biogas

Russian invasion of Ukraine enforces phasing out of fossil gas

Energy Agency scenario – Frozen policy



Biogas Danmark scenario – enforced policy

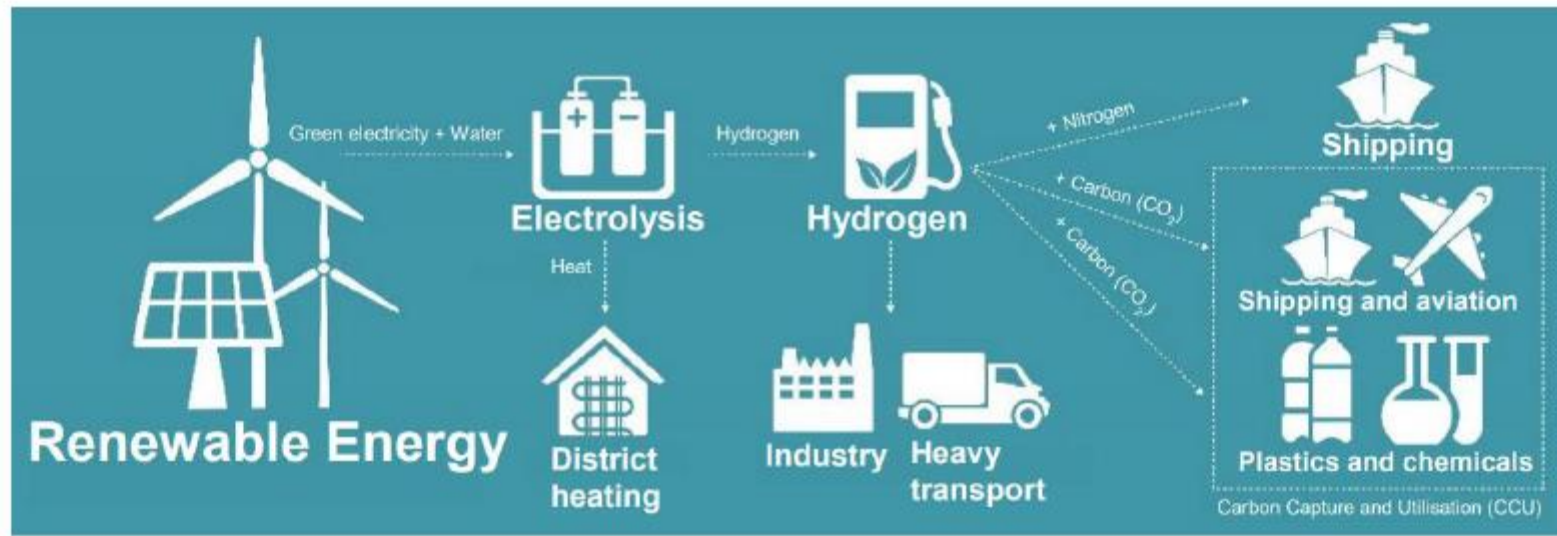


Off grid Household Power and heat Industry Transport

Fast implementation of tenders can make Denmark independent of fossil natural gas in 2027

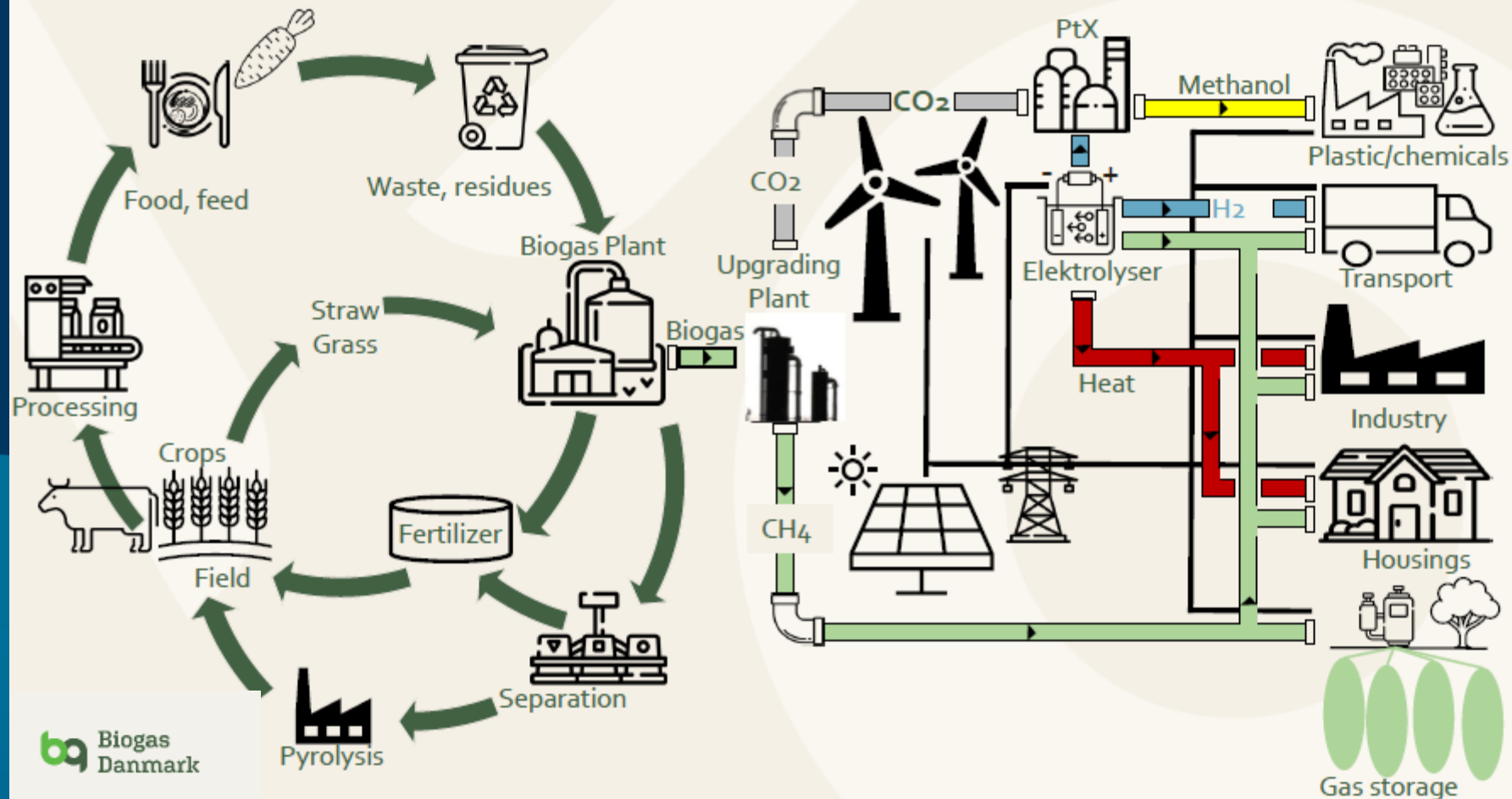
WHAT DO WE MEAN BY POWER-TO-X (PTX)?

"Green electrons as input and green molecules as output"



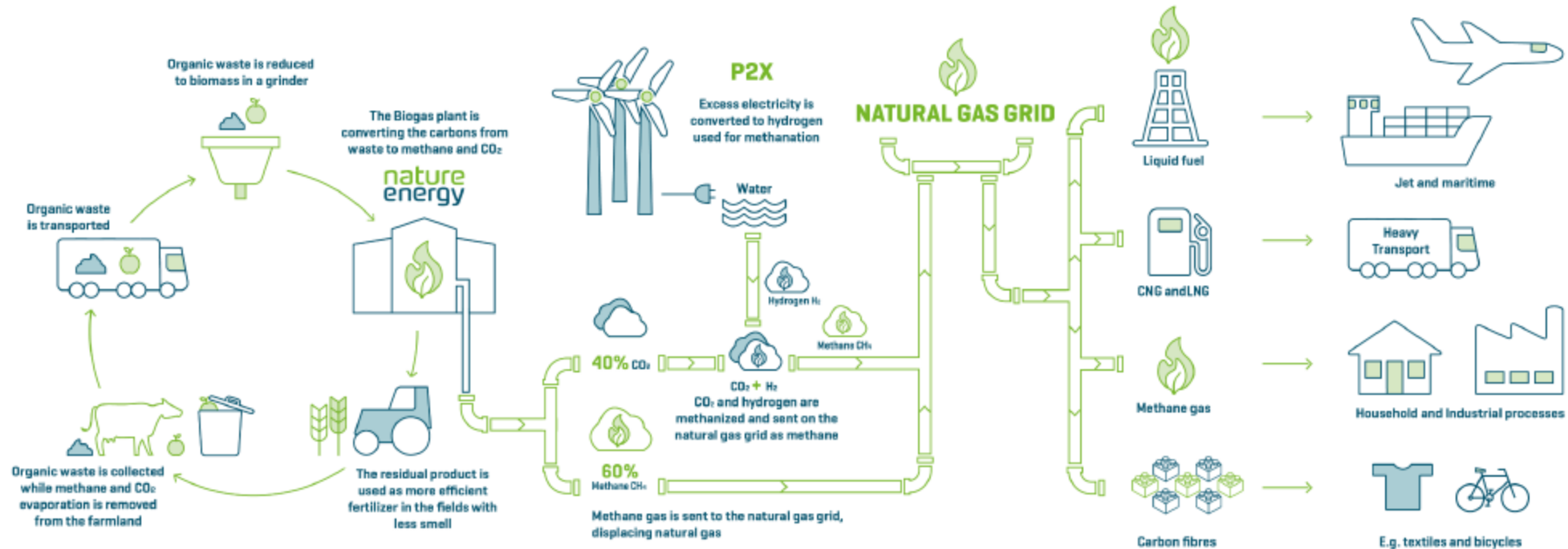
Product examples: Hydrogen (H₂), Ammonia (NH₃), Methanol (CH₃OH), Methane (CH₄) and Kerosene (C₁₂H₂₆-C₁₅H₃₂)

Future integrations: Food, feed, fertilizer, fuels, fibres



Industrial innovation

Circular economy



Timeline

- ☑ Workplan approval and funding from EPA (Oct 7)
- ☐ Agreements to transfer funds from MPCA to partner agencies (expected fall/winter)
- ☐ Hiring, engagement, program development (ongoing)
- ☐ **Early- to mid-2025: first grant opportunities expected**

Grant period runs from Oct 1, 2024, through September 30, 2029



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www.pca.state.mn.us/air-water-land-climate/minnesota-climate-smart-food-systems

