



Siting and Planning for Decommissioning of Large Solar

MACPZA Spring Conference

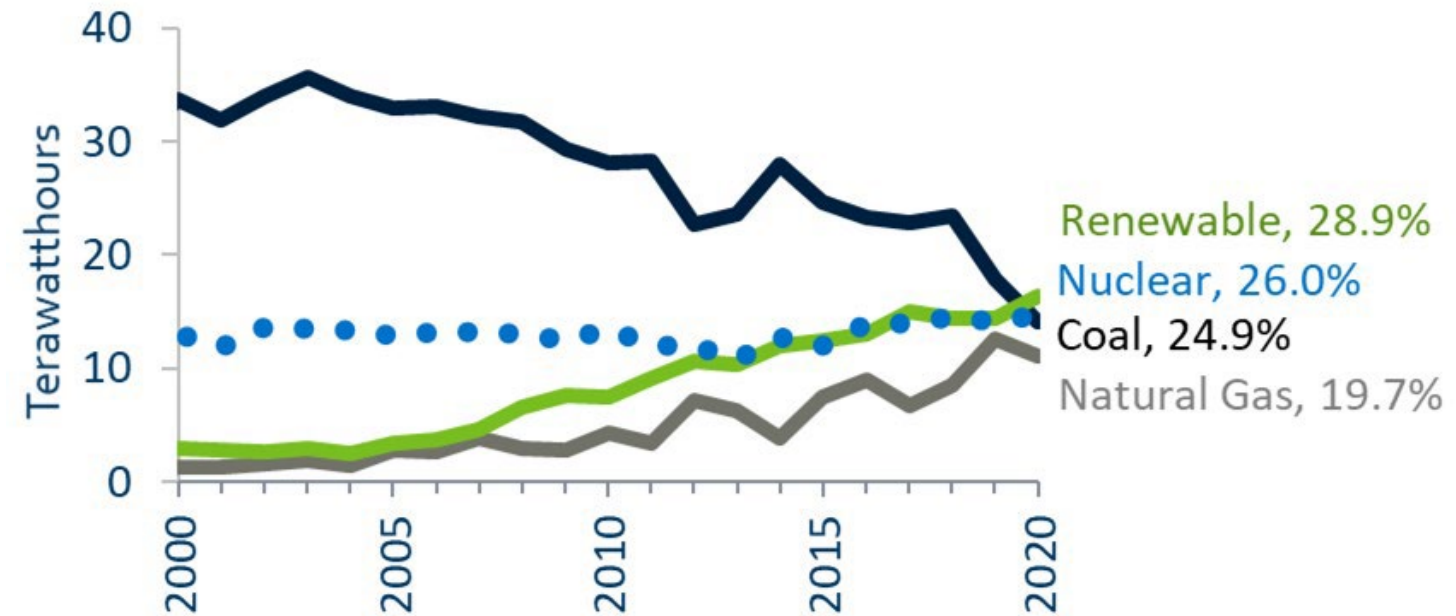
June 3, 2021

Suzanne Lamb Steinhauer | Environmental Review Manager

- Solar Growth
- Siting Large Solar
- Planning for Solar Decommissioning
- Range in Estimated Costs

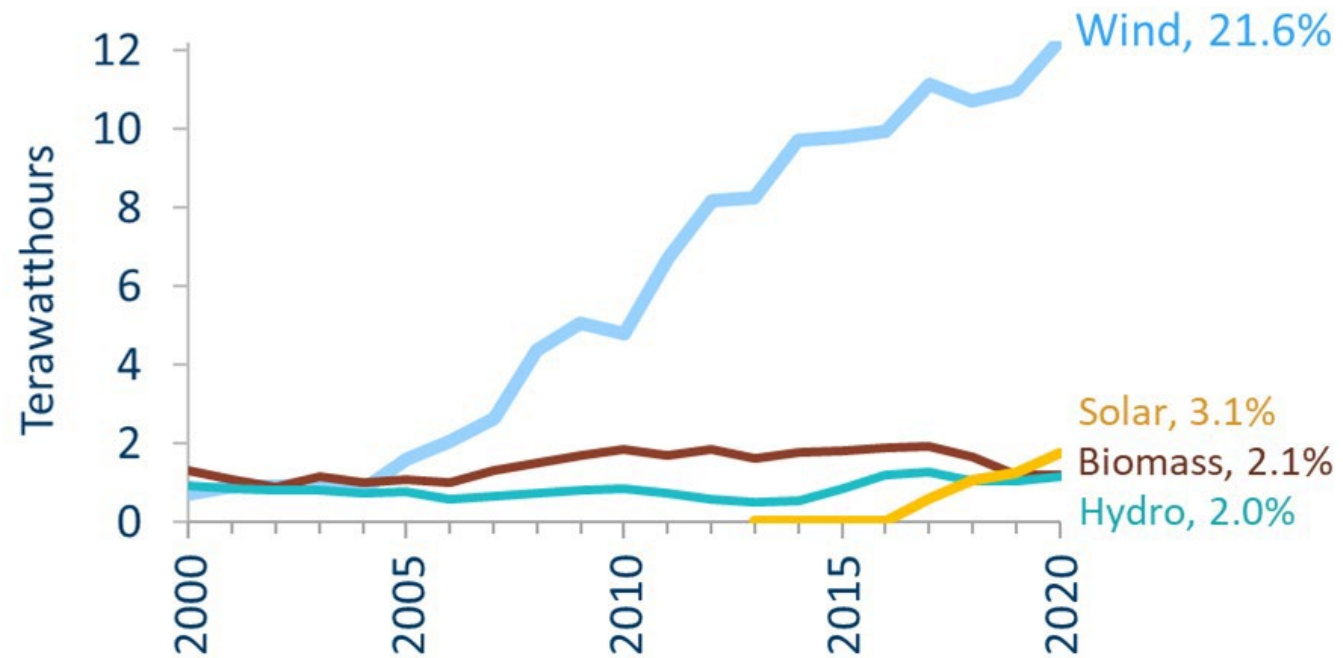
Increase in Renewables

Electric Generation



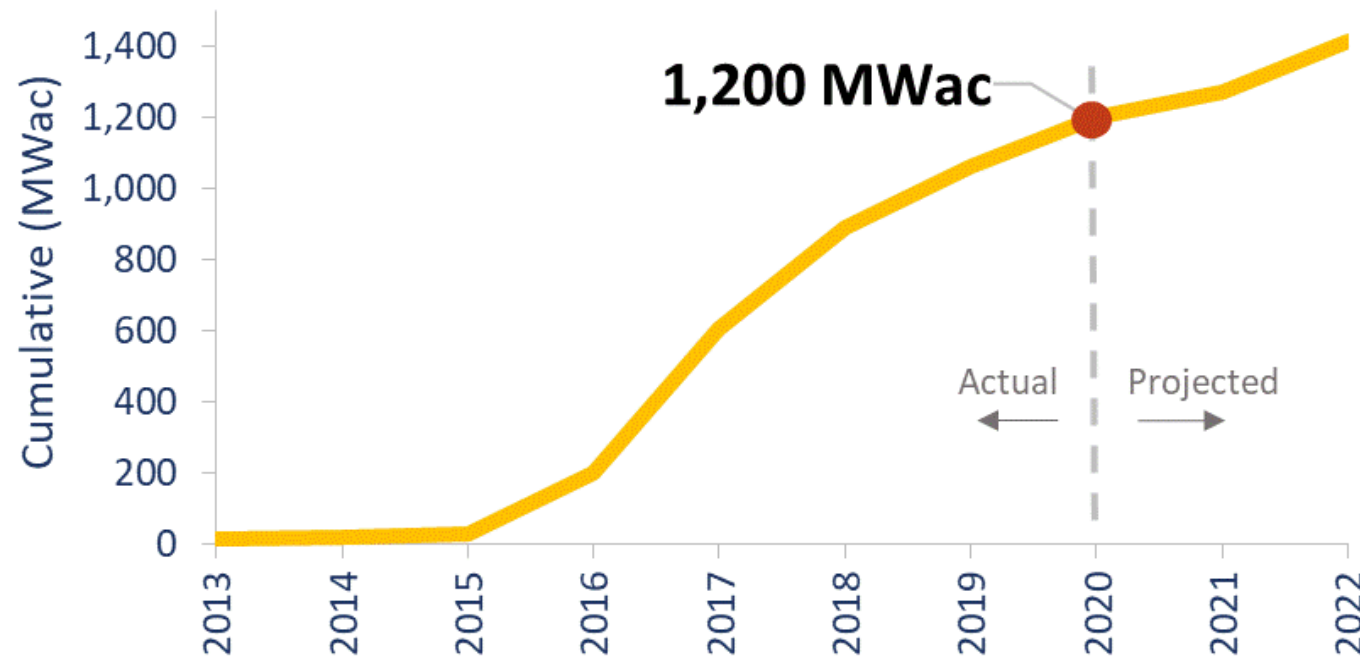
Source: MN Commerce 2020 Quad Report

Renewables by Type



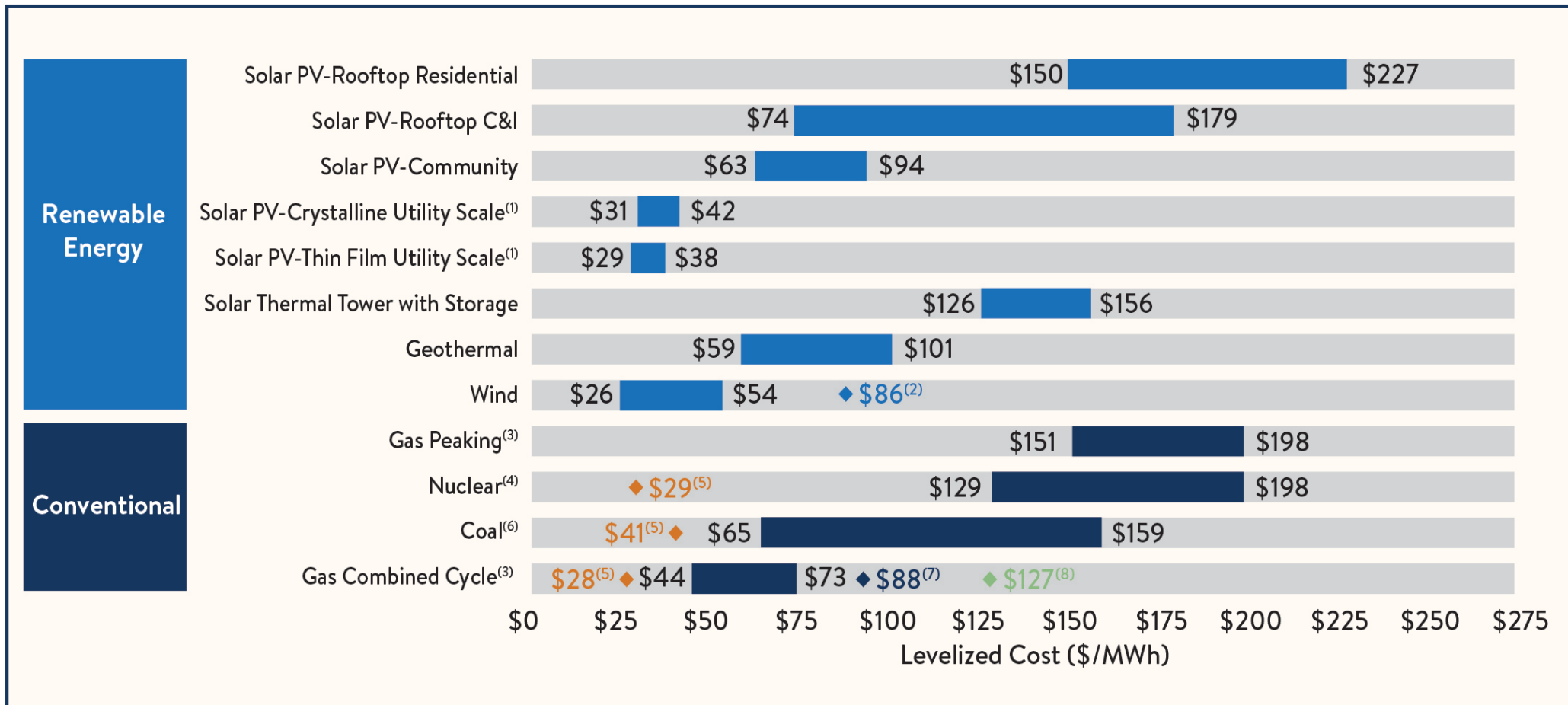
Source: MN Commerce 2020 Quad Report

Minnesota Installed Solar Capacity



MN Commerce – 2020 Quad Report

Cost Comparison by Type



Lazard's Survey of Electricity Prices by Source

Siting Process for Solar Facilities > 50 MW

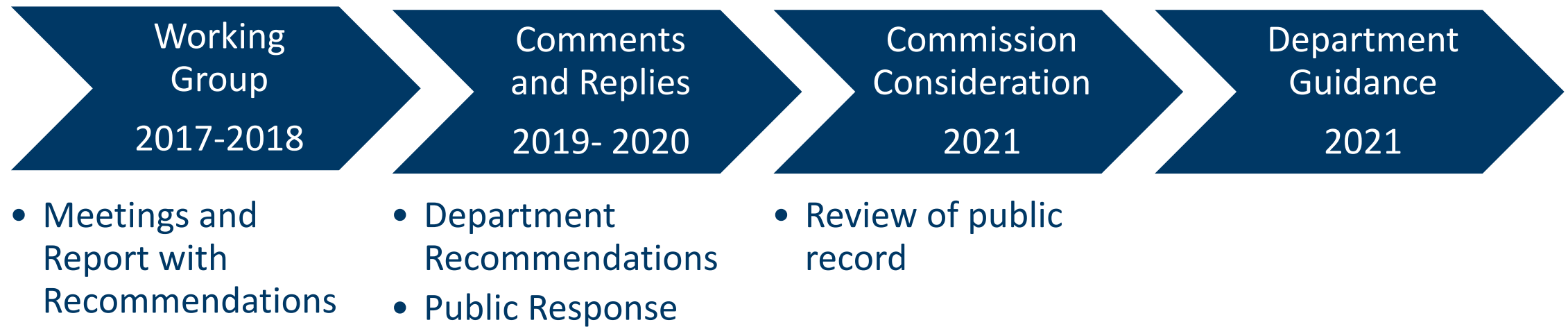
- Application
- Environmental Review with Scoping
- Public Hearing
- Commission Decision
- Permit Issuance
- Compliance through construction and permit life

- 30-year permit
- Complaint procedures
- Establishment of beneficial habitat
- Decommissioning requirement

Decommissioning plans describe

- How the physical components will be removed
- How site will be restored
- The estimated cost of decommissioning
- How funds will be available at the end of the facility's life to accomplish decommissioning tasks

Development of Decommissioning Review



Working Group Recommendations

Decommissioning plans should be

- Required
- Detailed
- Adaptable

Working Group Recommendations

Financial Assurance

- Provide a variety of financial instruments be available to project owners
- Financial surety is not necessary at the outset, but should be in place prior to decommissioning
- Financial sureties can be implemented incrementally, possibly beginning about year 10
- State or local governmental entities should be the beneficiary, not individual landowners

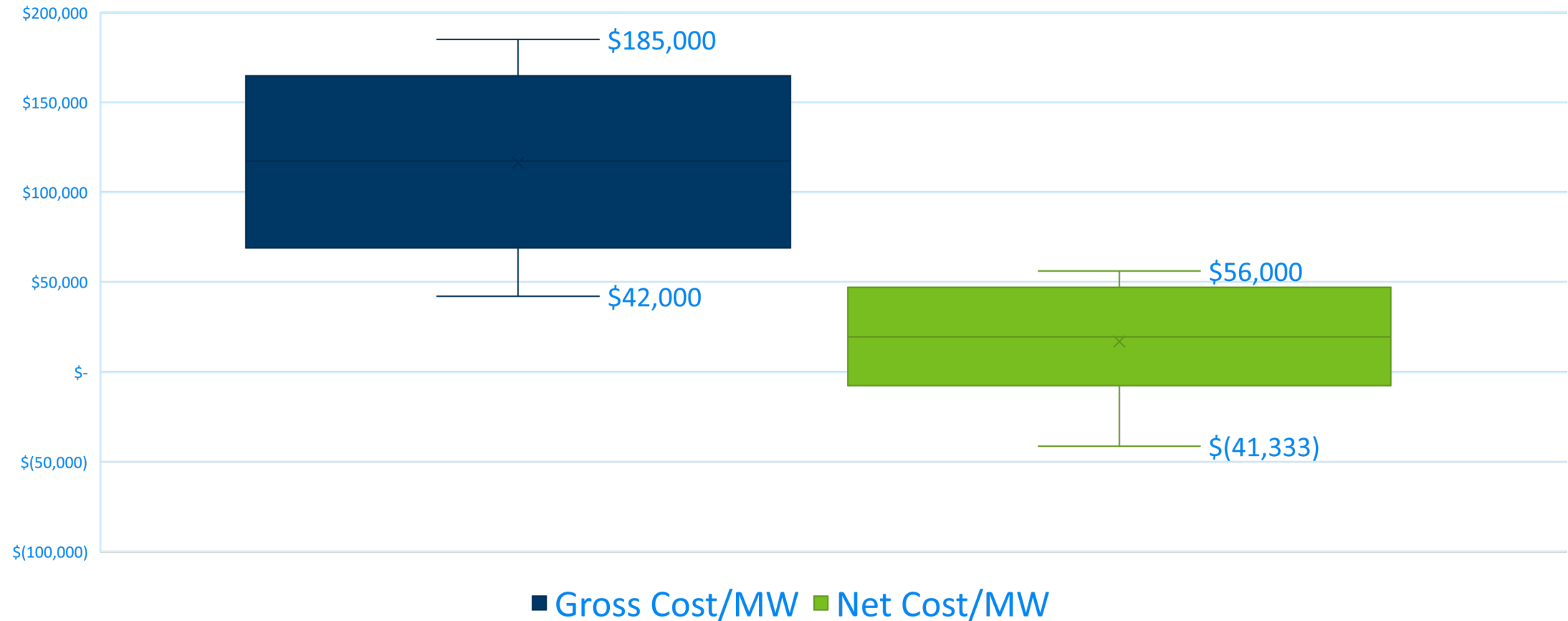
Department Recommendations – Plan Content

- Project Description
- Decommissioning Objective
- Permits and Notifications
- Tasks and Timing
- Estimated Cost
- Financial Assurance

Department Recommendations – Plan Review

- Draft decommissioning plan with permit application
- Pre-construction plan
- 5-year rolling review
- Update at project milestones
- Refer to Commission as project ages

Estimated Decommissioning Costs/MW



Thank You!

Suzanne Lamb Steinhauer

suzanne.steinhauer@state.mn.us

651-539-1843