Solar Development at Minnesota’s Closed Landfills

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Closed Landfill Program
• MPCA is responsible for the long-term care of 110 closed landfills (1994 legislation)
• Manages risks to protect human health and the environment
• Addresses groundwater contamination and landfill gas migration
• Develops Land use Plans for local government adoption
Solar Opportunities at Closed Landfills

• The CLP currently manages over 8,500 acres of closed landfill property - about 75 percent of this acreage does not contain solid waste

• Many landfills have few solar obstructions

• Some of the landfills utilize electricity for operating gas extraction flares and groundwater pump-out wells

• The CLP develops land use plans that identify solar as a land use and many local governments have adopted zoning ordinances allowing this use

• The demand for solar development at closed landfills exists
Lindenfelser Landfill Solar Array

- Installed as part of the Made in Minnesota Solar Incentive
- Paid for by surplussing (selling) land at another landfill
- 40 kW Array
- Installed to offset electrical use at site to power gas extraction system flare
- Since installation in 2015:
  - Energy Used = 37.7 MWh
  - Energy Generated = 132 MWh
  - Net = 94.4 MWh sold
Washington County Landfill Solar Array

- Installed as part of the Made in Minnesota Solar Incentive
- Paid for by surplussing (selling) land at another landfill
- 40 kW Array
- Installed to offset electrical use at site to power gas extraction system flare, groundwater pumping wells, and leachate load out
- Since installation in 2015:
  - Energy Used = 179 MWh
  - Energy Generated = 164 MWh
  - Net = 14.2 MWh bought
Solar Challenges at Closed Landfills

• The CLP’s use of state general obligation bonds for response actions places use and sale restrictions on land where the bonds were spent, including leases for private benefit

• Minn. Rule 1245.0900 requires competitive bidding for leases on state-owned land

• Reconstructed waste covers less than 10+-/- years old present a concern for waste settlement and possible need for repairs

• The occasional need for landfill cover repairs may require solar arrays installed on waste covers to be temporarily relocated
• Work with City and County governments to split a parcel where g.o. bonds were used – but create the new parcel where the improvements did not occur
Future Solar Development at Closed Landfills

• MPCA will assist EQB with providing landfill data, including spatial data depicting bond parcels
• Continue to look for opportunities to split parcels where we used bond funds to create land free from g.o. bond encumbrances
• Continue to build and own small arrays to offset electrical use/costs at individual sites
• Lease state’s land to solar developers
Questions?

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