

Renewable Energy Workshop 2018

A professional development workshop for teachers / informal educators to design and deliver objective, multi-sided energy education programs

FEATURING BIOMASS – HYDRO – WIND- SOLAR TOURS!!!

Offering #1 August 2-3, 2018 - Offering #2 August 6-7, 2018

Free Camping Available at Boulder Lake ELC for participants.

REGISTER HERE: <https://goo.gl/forms/laGQifMCX4K6PPTo2>



Day I

Start at Bagley Outdoor Classroom - UMD

9:00 a.m. Welcome & Introductions

Workshop leader introductions and participant introductions with icebreaker
Workshop overview & objectives.

9:15 a.m. The Science of Energy & Electric Connections

Learn more about the forms of energy through experiments and Electricity 101

10:45 – 11:00 Minnesota Power 101 – Introduction to how including how electricity is distributed and how different electric service is in this region than the rest of the country because MP serves such a large industrial load (the mines & paper mills) that need constant power (which is a

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challenge to intermittent renewable resources) as well as their transition from being over 90% coal based to their goal of 33% renewables

11:00 a.m. Depart for Jay Cooke State Park

11:30 a.m. Lunch at Jay Cooke State Park

12:15 Hydro Power Tour with cost/benefit analysis of hydropower in the region.

2:00 p.m. Depart for Hibbard Renewable Energy Center

2:30 p.m. Hibbard Biomass Tour with cost/benefit analysis of biomass in the region.

4:00 p.m. Depart

4:15 p.m. Wrap up / Reflect on Day 1 and lay groundwork for Day 2

4:30 p.m. Day 1 concludes

Supper and Lodging on your own...

Day 2

Start at Bagley Outdoor Classroom UMD

8:00 a.m. Wind Energy Basics

8:15 a.m. Hands-on Wind!

These lessons encourage inquiry into wind energy and the transformation of mechanical energy into electricity.

9:15 a.m. Solar Energy Basics

9:30 a.m. Hands-on Solar!

These lessons encourage inquiry into radiant energy and an understanding of the energy transformations from radiant to electrical energy and thermal energy.

10:30 a.m. Tour of St. Louis County Government Center Solar Array - Minnesota Power Solar Initiatives presentation with cost/benefit analysis of solar in the region.

12:00 p.m. – 1:30 Lunch – Provided on bus to Taconite Ridge

1:30-3:00 p.m. Tour of Taconite Ridge with cost/benefit analysis of wind power in the region.

3:00-4:30 p.m. Workshop reflection / wrap-up on bus ride to UMD.