Farmers Irrigation District: Water, Energy, Environment
Brief Overview of FID

[Map of Oregon with highlighted Hood Basin]
Challenges
Infrastructure Pre 1986

- 34 Points of Diversion
- 70 + miles of open canal
- 1,451 small irrigation pumps (one for each user/group)
- No hydropower production
- No fish screens
Pre 1986 Issues

- Water reliability/water loss
- Canal failures/sediment into rivers
- Fish entrainment (ESA species)
- High O&M costs
- Debris and sediment management
- Insufficient revenue to meet needs
Enter: 1986/87 Hydro
Infrastructure Today

- 11 Points of Diversion
- 11 Fish Screens
- 70 Miles of Pipeline Installed
- 2 Miles of Open Canal Remaining
- 1 Central Pump Facility
- 1 Central Filtration Facility
- 2 Sediment Removal Facilities
- 2 Low Impact Hydro certified Hydro Power Facilities
Results of Hydro Revenue

- 23 Diversions Eliminated
- 11 Fish Screens Installed
- 70 Miles of Pipe Installed
- Generate 24 Million Kilowatt Hours Annually
- 1,451 Individual Pumps Eliminated
- 1.45 Million Kilowatt Hours Conserved Annually
Results Continued

- 15,000 Acre Feet of Water Conserved Annually (4,887,765,000 gallons)
- 2,288 tons of sediment kept out of rivers and stream annually due to canal failures
- 85,000 board feet of wood placed in stream for fish habitat
- 2 Minimum In-stream flow agreements
- $494,200 in avoided O&M Costs
- Over $50 Million invested in District
Additional Benefits

- Decrease in accumulation of nutrients and chemicals
- Protection of 5,888 acres of high value farmland
- Improved on-farm economics
- Decrease in on-farm fertilizer and sprays
Energy System Benefits

• Distributed Local Renewable Generation
• Local grid stability/support
• Continual local re-investment of energy related revenue in modern infrastructure
• Local energy resilience/disaster preparedness
• Potential for black start for emergency/disaster preparedness
Recent Hydro System Investments

• Hydro revenue allowed us to have modern communication infrastructure and real time data analysis, alerts and monitoring that decreases our O&M costs significantly.

• Complete turbine/generator/controls replacement at Plant 2 in 2015

• New control system for Plant 3 in 2016

• Replacement of transformer in switchyard
Thank You

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