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Conservation Council**

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September 9, 2015

MEMORANDUM

TO: Council Members

FROM: Shirley Lindstrom

SUBJECT: Idaho Power Presentation

BACKGROUND:

Pete Pengilly, Customer Research and Analysis Leader, Idaho Power Company; and Quentin Nesbitt, Energy Efficiency Program Leader, Idaho Power Company will make a presentation on Idaho Power's Demand Response Program.

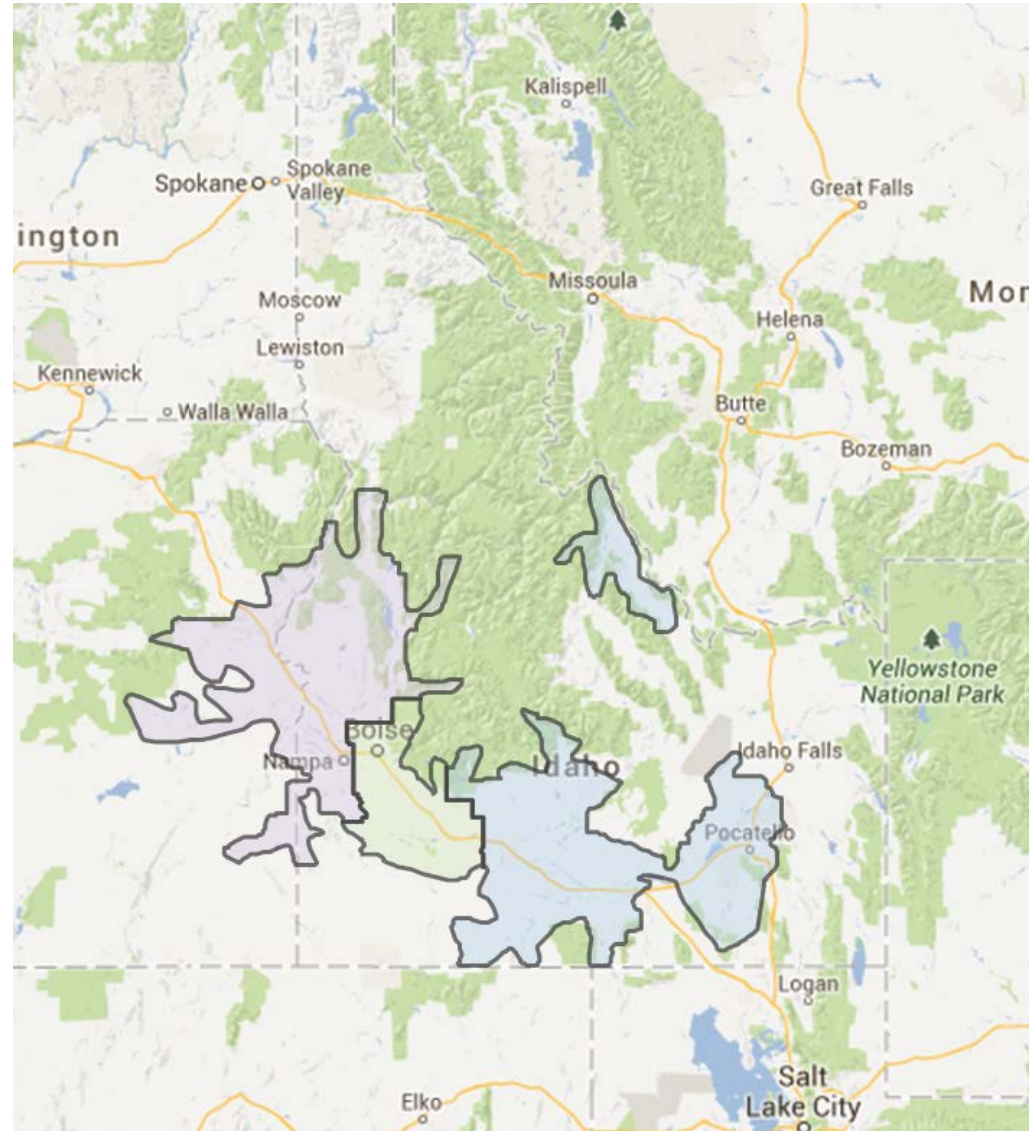
Demand Response



Quentin Nesbitt, PE
Energy Efficiency Program Leader
September 16, 2015

Idaho Power Company

- Generation Nameplate
3,018 MW
- PURPA 220 MW
- Purchased Power
Agreements 23 MW
- Firm Transmission in July
approximately 243 MW
- System Peaks
 - ✓ 3,214 MW - 2008
 - ✓ 3,268 MW - 2012
 - ✓ 3,407 MW – 2013

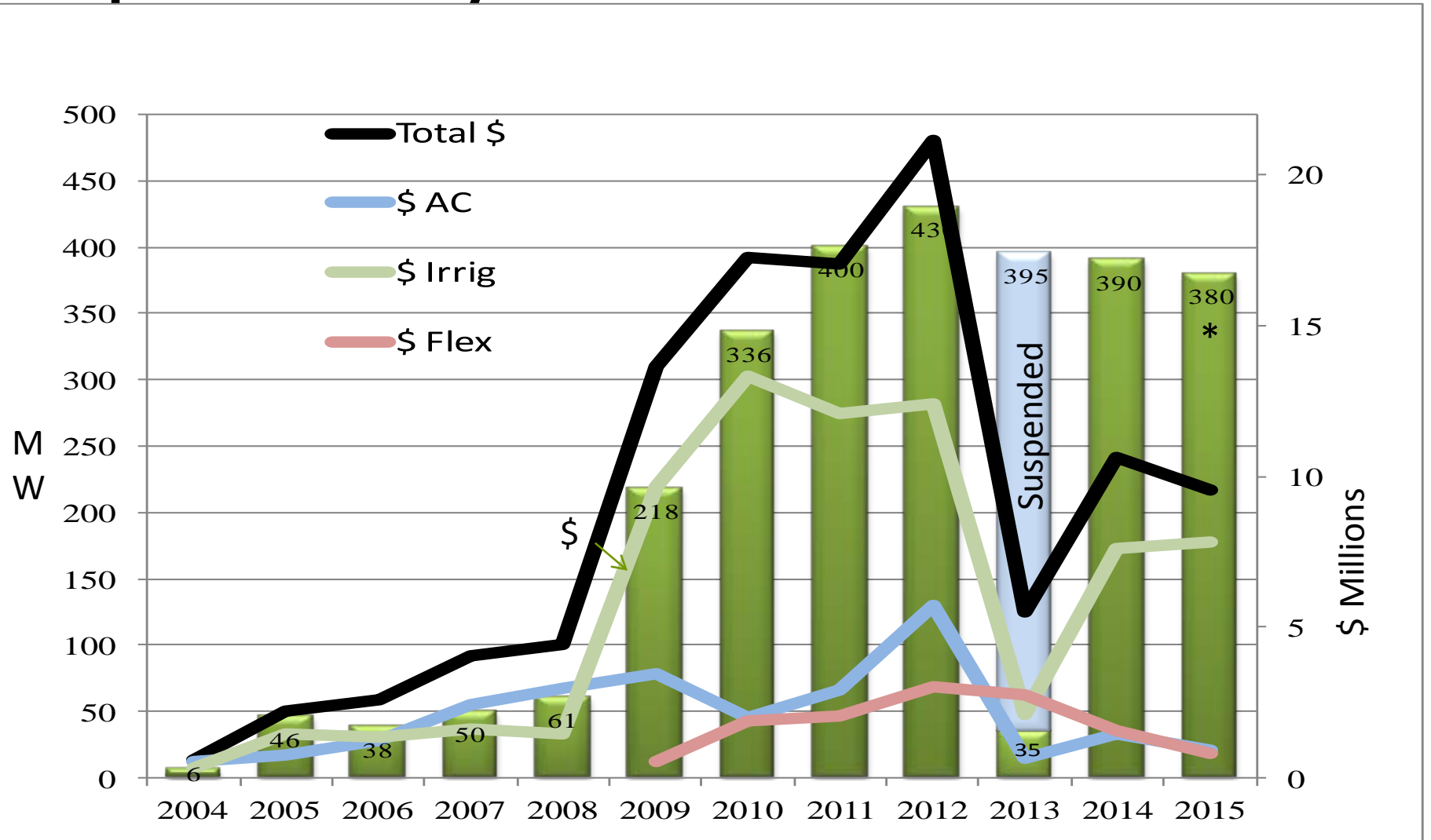


Idaho Power Demand Response Programs

- Irrigation Peak Rewards-2,258 sites 320 MW
- Flex Peak-71 sites 25 MW
- A/C Cool Credit-29,017 sites 35 MW

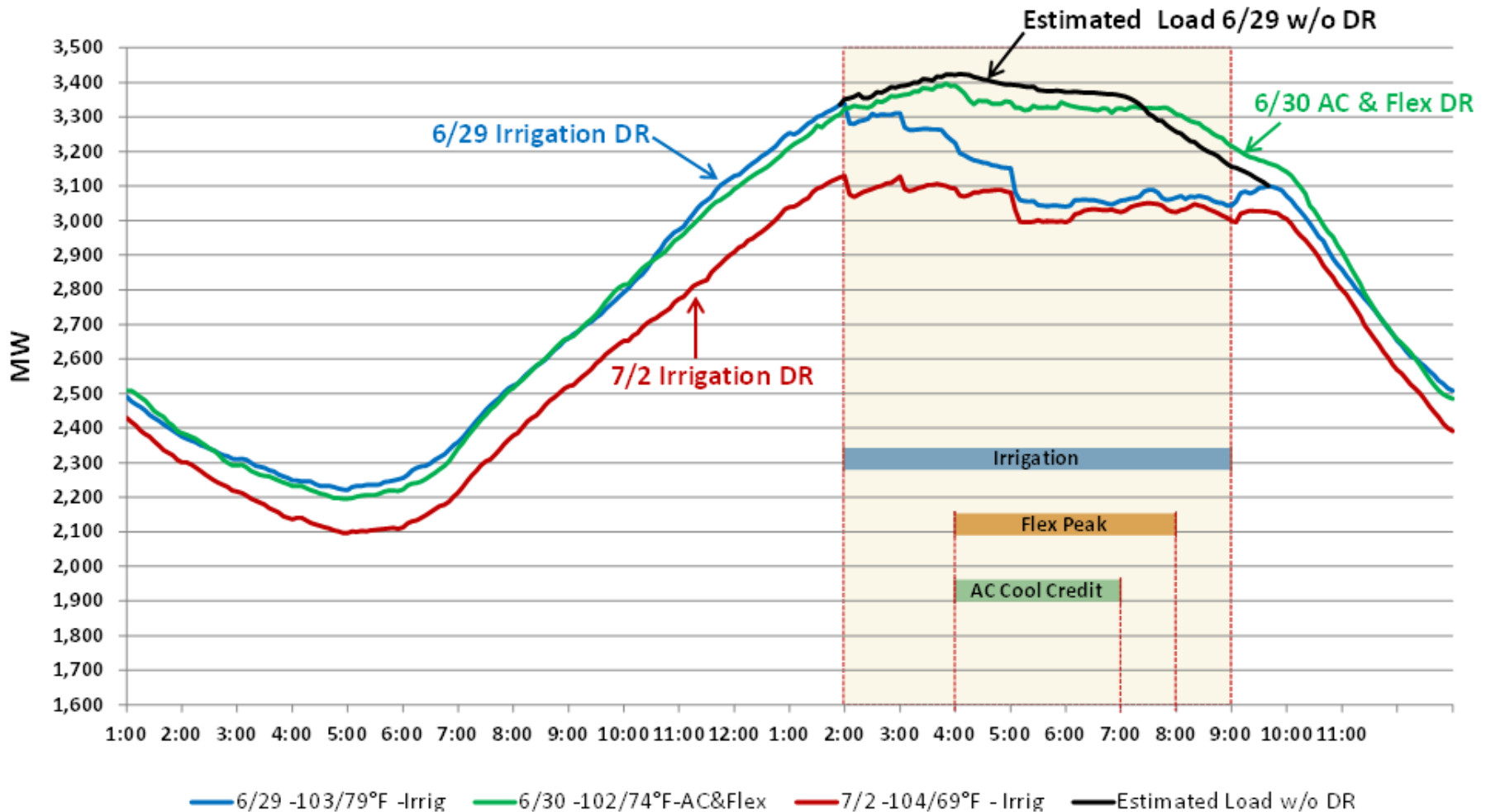


Idaho Power Demand Response History

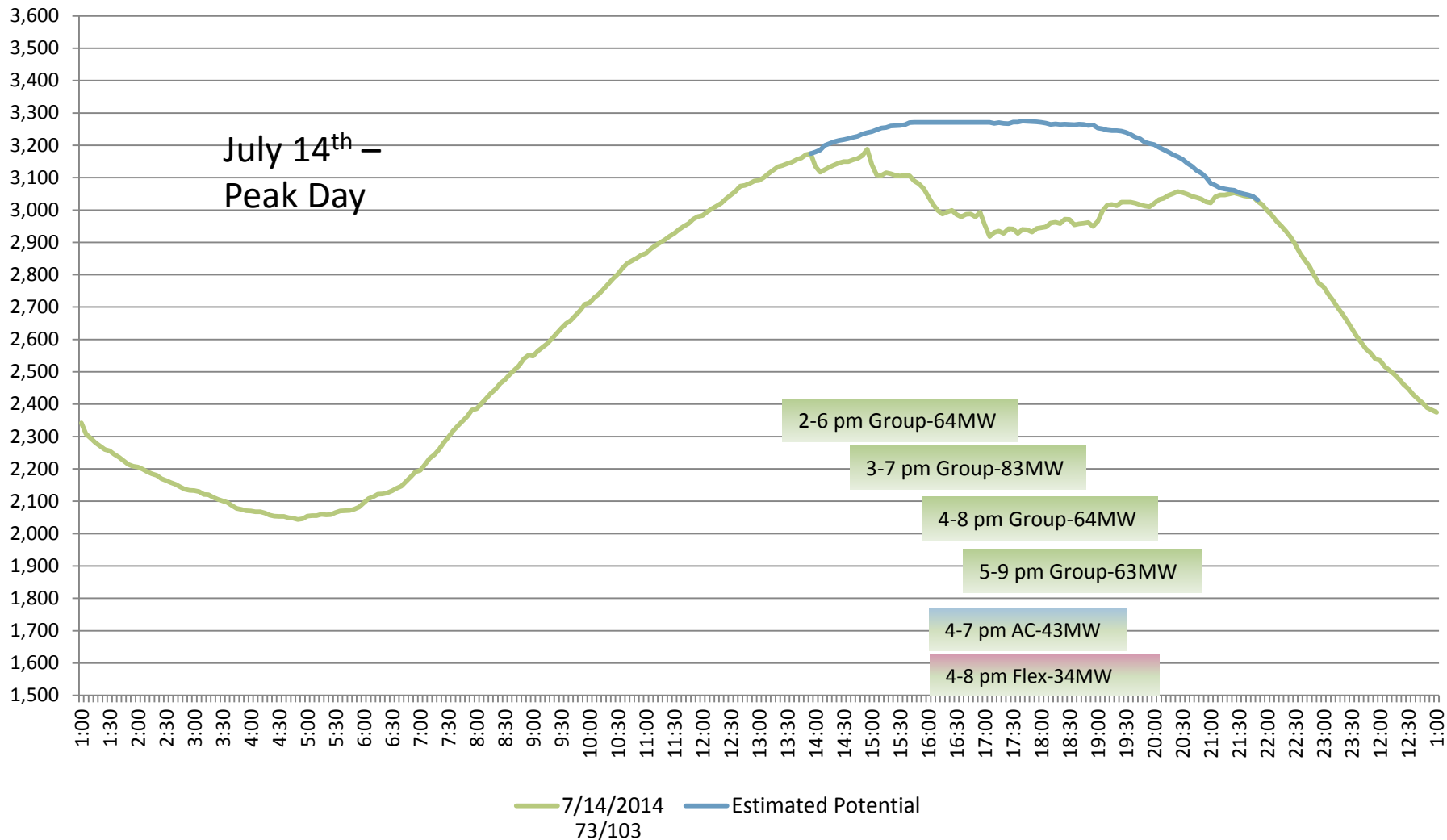


* 2015 numbers are preliminary

2015 Demand Response Results



2014 Results – All Three Programs





Why Do We Do Demand Response?

---Integrated Resource Plan (IRP)

- 2004-2009 IRP's showed capacity need
- Capacity – MW (kW)
 - Peak capacity need has and continues to grow faster than energy
 - Peak-hour capacity primarily due to continued growth in air conditioning load coinciding with existing irrigation load
- Energy – MWH (kWh)
 - Growth in energy at a slower pace than capacity and has been more affected by new PURPA wind energy
- All cost effective DSM
- It is a resource for a special need
- Very few hours
- Cost effective DR ? Need ?

IRP

- Compare loads to resources to identify needs
 - Load forecast
 - DSM (energy efficiency & DR?)
 - Existing resources (including transmission) and market purchases
- IRP planning criteria
 - Energy (70th percentile water, 70th percentile load)
 - Capacity (90th (1yr in 10 yr) water, 95th (1 yr in 20 yr) load)
 - 110 degrees in early July
- Every 2 years – Required by Commissions

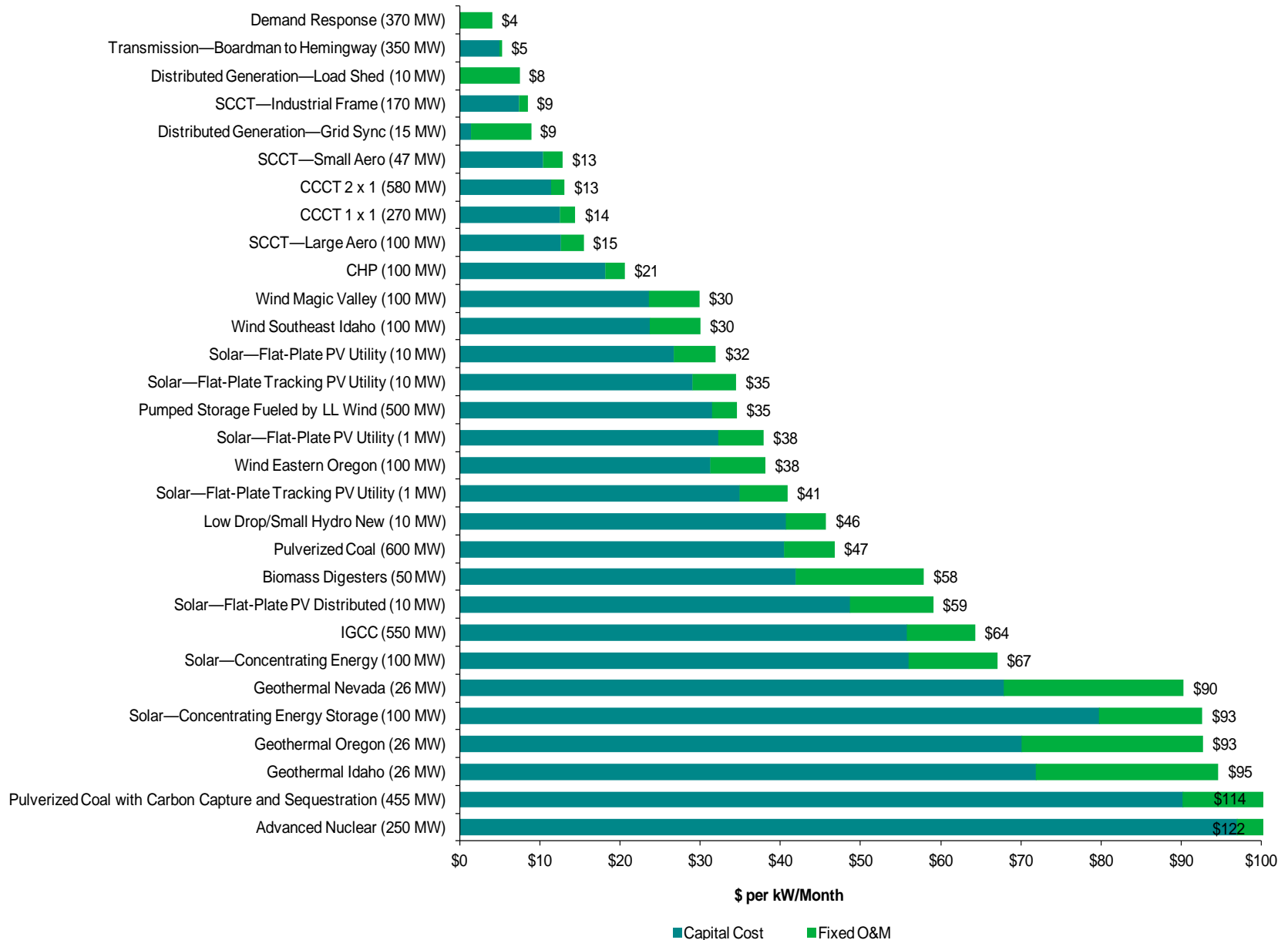


Demand Response Myths

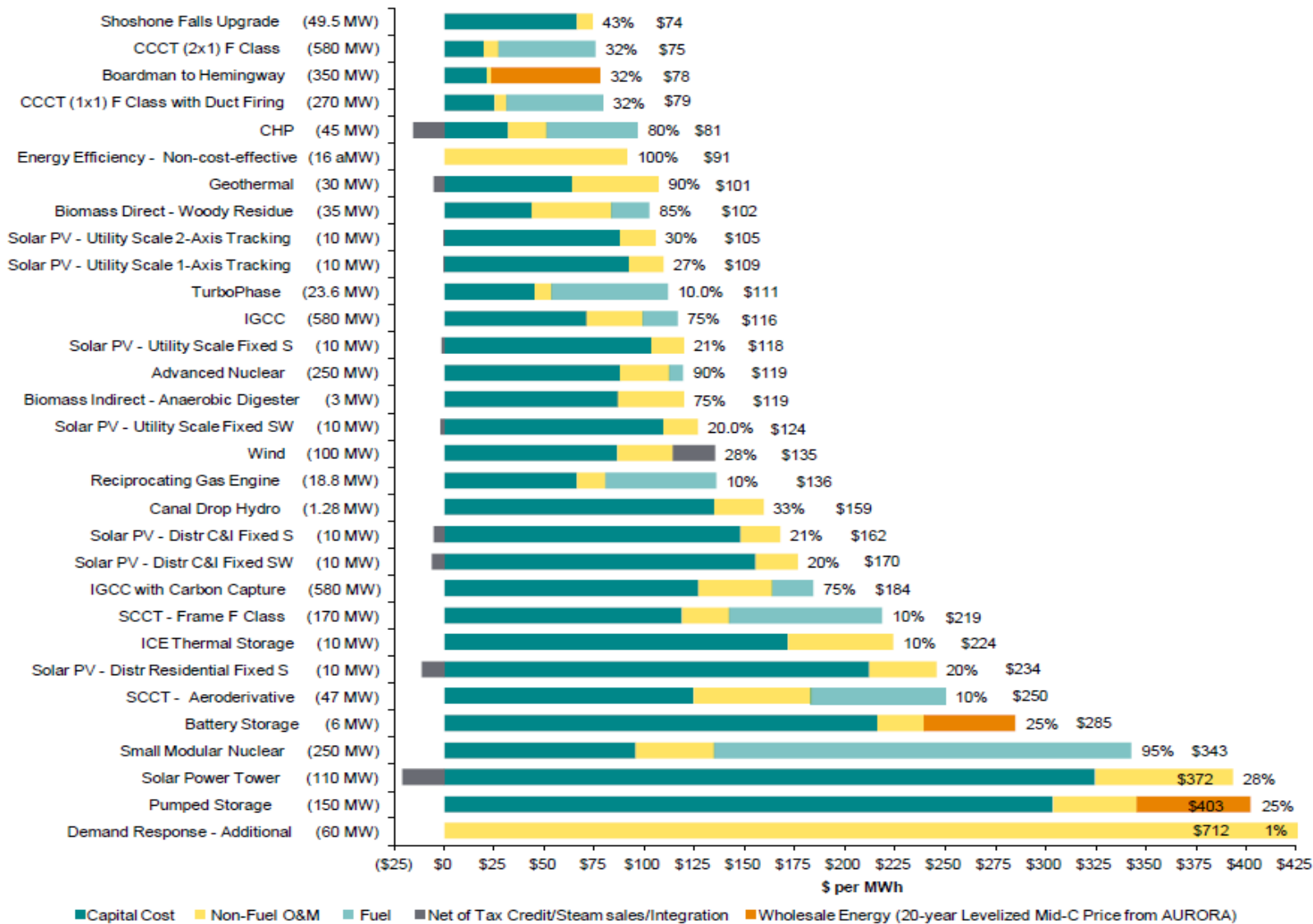
- It saves energy
- It's the cheapest energy
- Customers don't even notice
- We need it on **all** hot summer days
- It is to avoid buying off the market



Capacity Cost Estimates

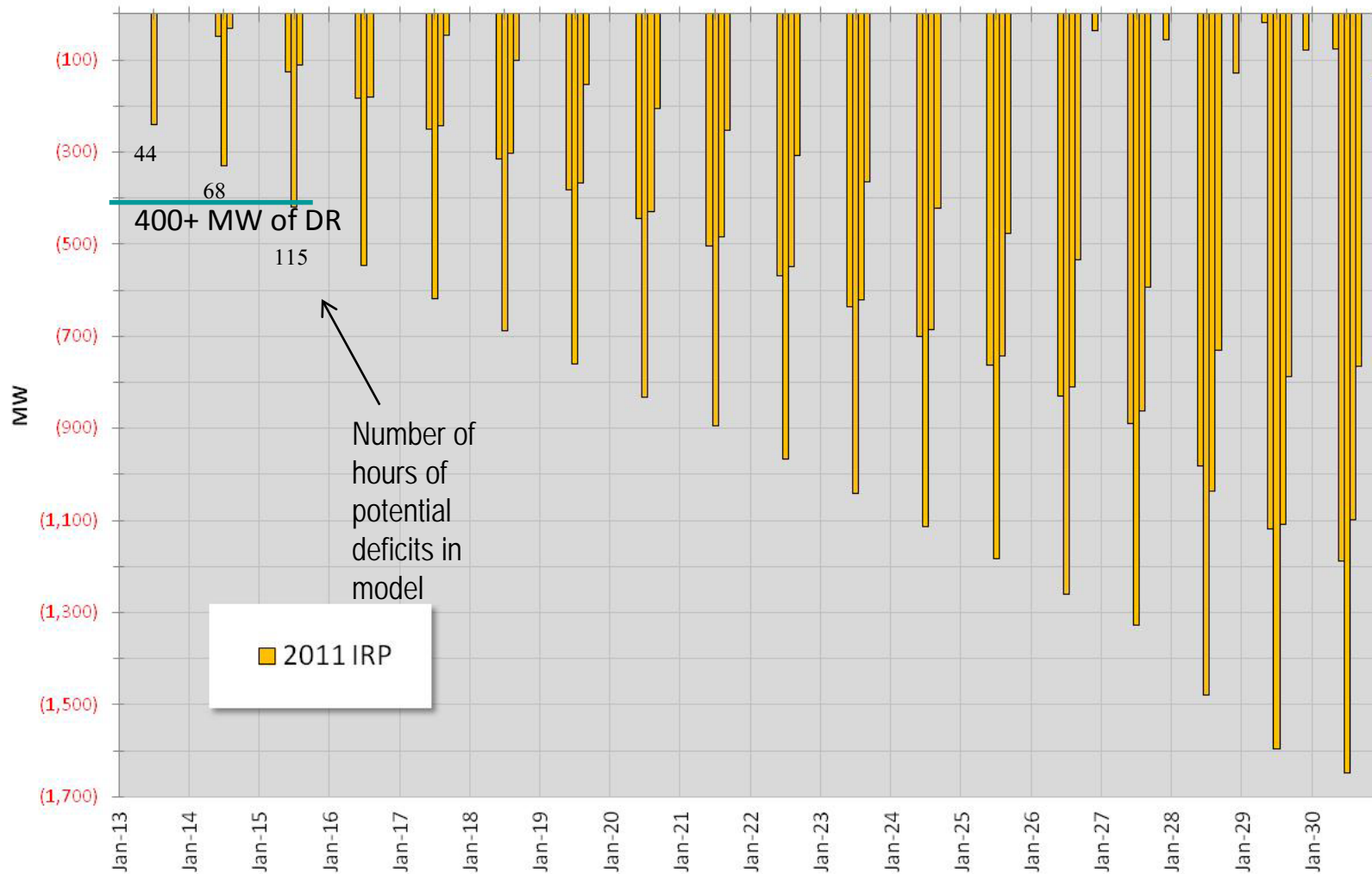


Energy Cost Estimates

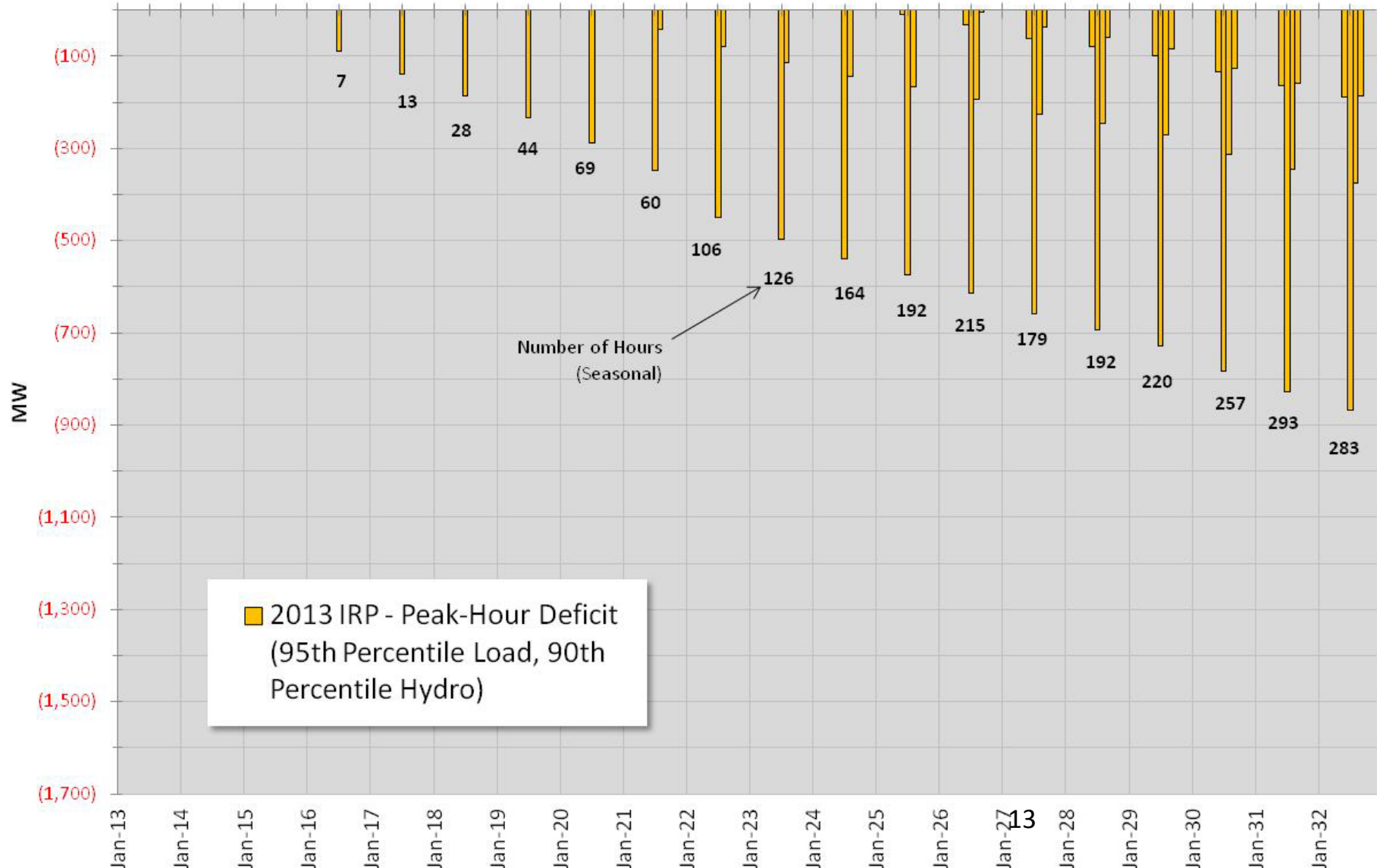


30-year levelized cost of production (at stated capacity factors)

2011 Idaho Power IRP

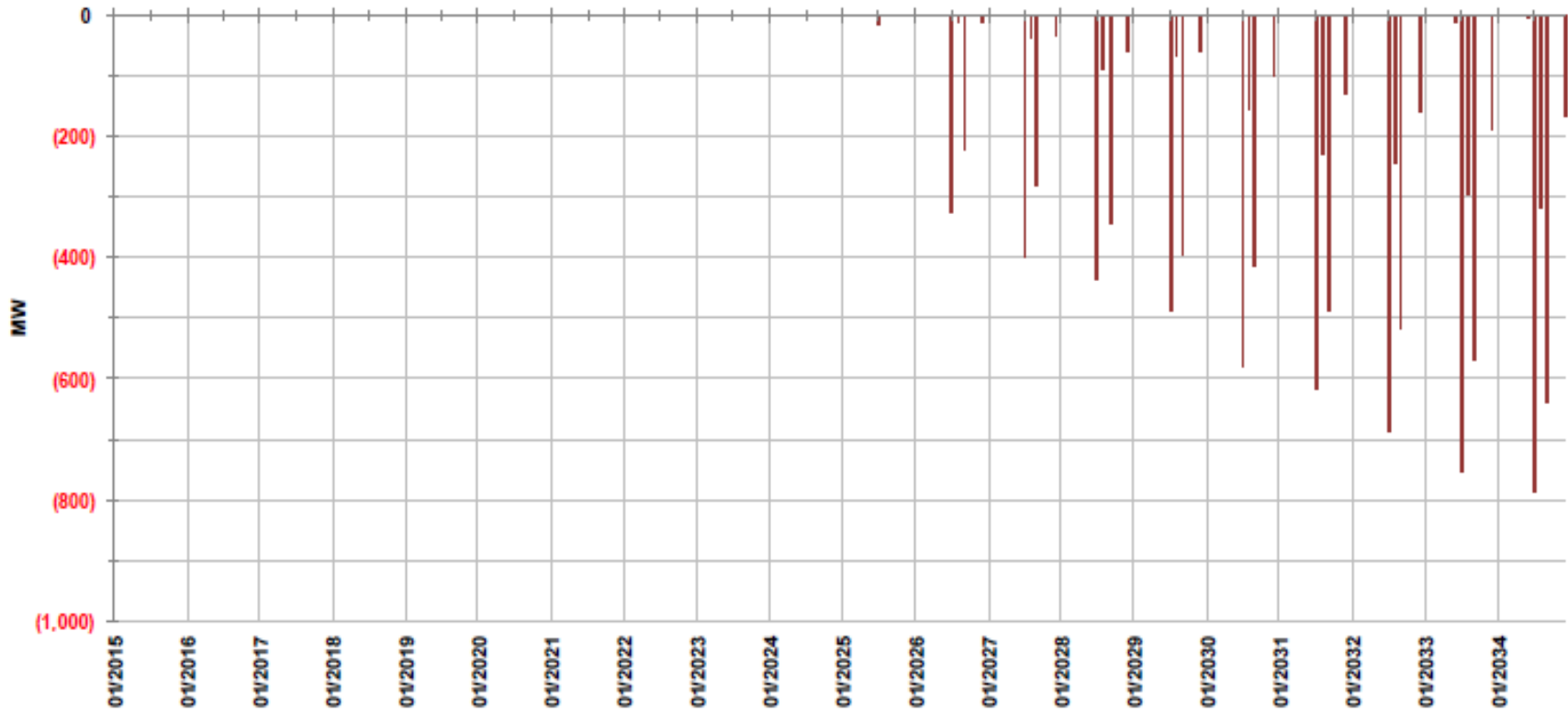


2013 IRP – Changed



2015 IRP

Peak-hour monthly deficits with existing DSM and existing resources



Peak-hour monthly deficits with existing DSM, existing resources, IRP DSM, and IRP resources

Program Parameters

Program	Irrigation Peak Rewards	Flex Peak	A/C Cool Credit
Dates	June 15 - Aug 15	June 15 - Aug 15	June 15 - Aug 15
Available Days	Weekdays and Saturdays; no Sundays holidays (4th of July)	Weekdays only; no weekends or holidays	Weekdays only; no weekends or holidays
Times Available	2 pm to 9 pm	2 pm to 8 pm	Not Limited
Duration/day	Maximum 4 hours per day.	Maximum 4 hours per day	Maximum 4 hours per cycling day
Per Week	No more than 15 hrs in a week	No more than 15 hrs in a week	No more than 15 hrs in a week
Per Season	Maximum 60 hours for summer	Maximum 60 hours for summer	Maximum 60 hours for summer
Incentive	Fixed and Variable ~\$16/kW & 20 cents/kWh	Fixed and Variable \$29.25/kW & 22 cents/kWh	Fixed \$15 per season
Minimum Use	3 events included in fixed incentive	3 events included in fixed incentive	3 events
Emergency	Is available for emergencies	2 hr notice is required	Is available for emergencies



Summary

- Demand Response is a great resource for the right need
- The utility needs to know the benefits and need before they begin
- Most of costs can be in incentives to customers
- Incentives can be treated or thought of as a bill credit
- Idaho Power is summer peaking so more potential load to shed with less impact