

NWPPA Power Supply Conference

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Presented by
Brenna Moore



Above-HWM Load Service Strategies

Power Supply Background



- Now – September 2011: BPA Partial Requirements Customer
- October 2011 – September 2028: BPA Slice/Block Contract
- April 2009: Signed PPA for 20 aMW of Wind
- 550 aMW load
- 1,115 MW Winter peak
- 824 MW Summer peak

Above-HWM Load Service

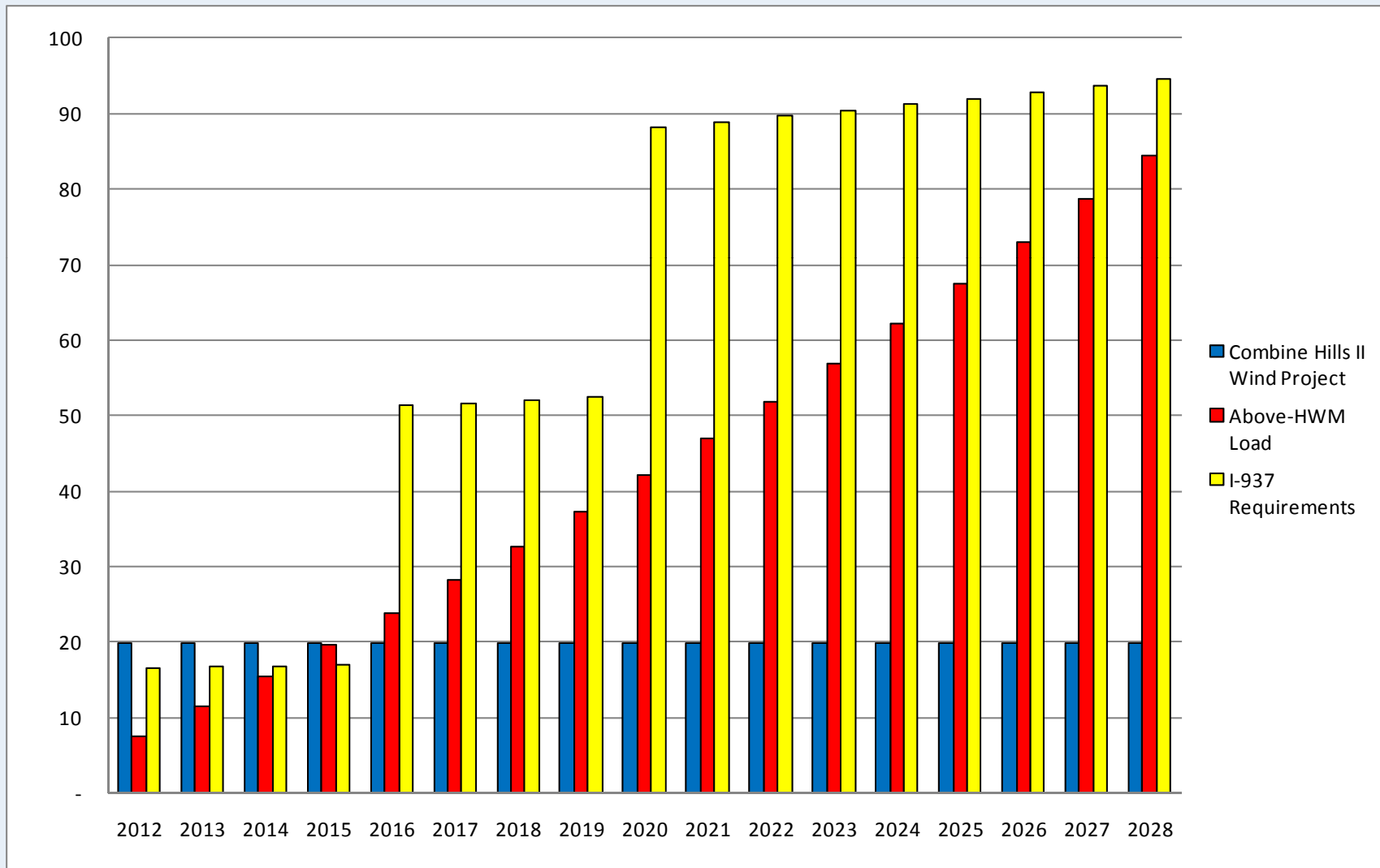
- **5th Power Plan Estimated Above-HWM Load**
 - 8 aMW in 2012
 - 20 aMW in 2015
 - 42 aMW in 2020

- **6th Power Plan Estimated Above-HWM Load**
 - 6 aMW in 2012
 - 12 aMW in 2015
 - 24 aMW in 2020

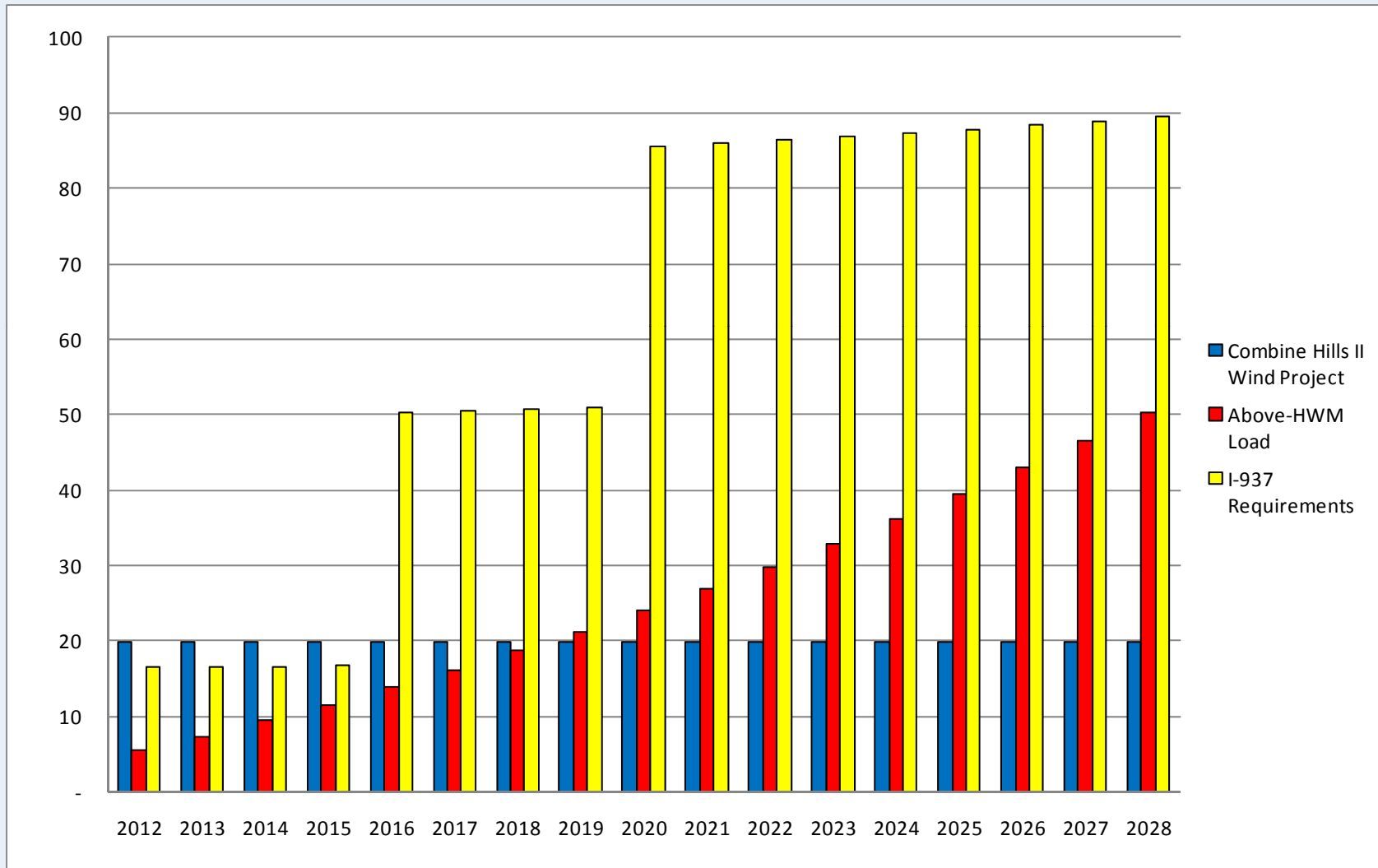
I-937 Compliance Requirements

- All Cost Effective Conservation Beginning in 2010
 - Targeting 4.8 aMW per year (5th Power Plan)
- Renewable Energy Purchases Beginning in 2012
 - 2012-2015: 3% \approx 17 aMW
 - 2016-2019: 9% \approx 50 aMW
 - 2020 and on: 15% \approx 90 aMW

I-937 vs. Above-HWM Load with 5th Plan Conservation



I-937 vs. Above-HWM Load with Estimated 6th Plan Conservation



A conservation potential study is currently underway that will more accurately determine CPU's conservation targets under the 6th Plan. The chart above is based on estimated targets.

Load Service Options

- Above-HWM (Load Growth Service)
 - BPA Tier 2
 - Acquisition
 - Build our own
 - Market

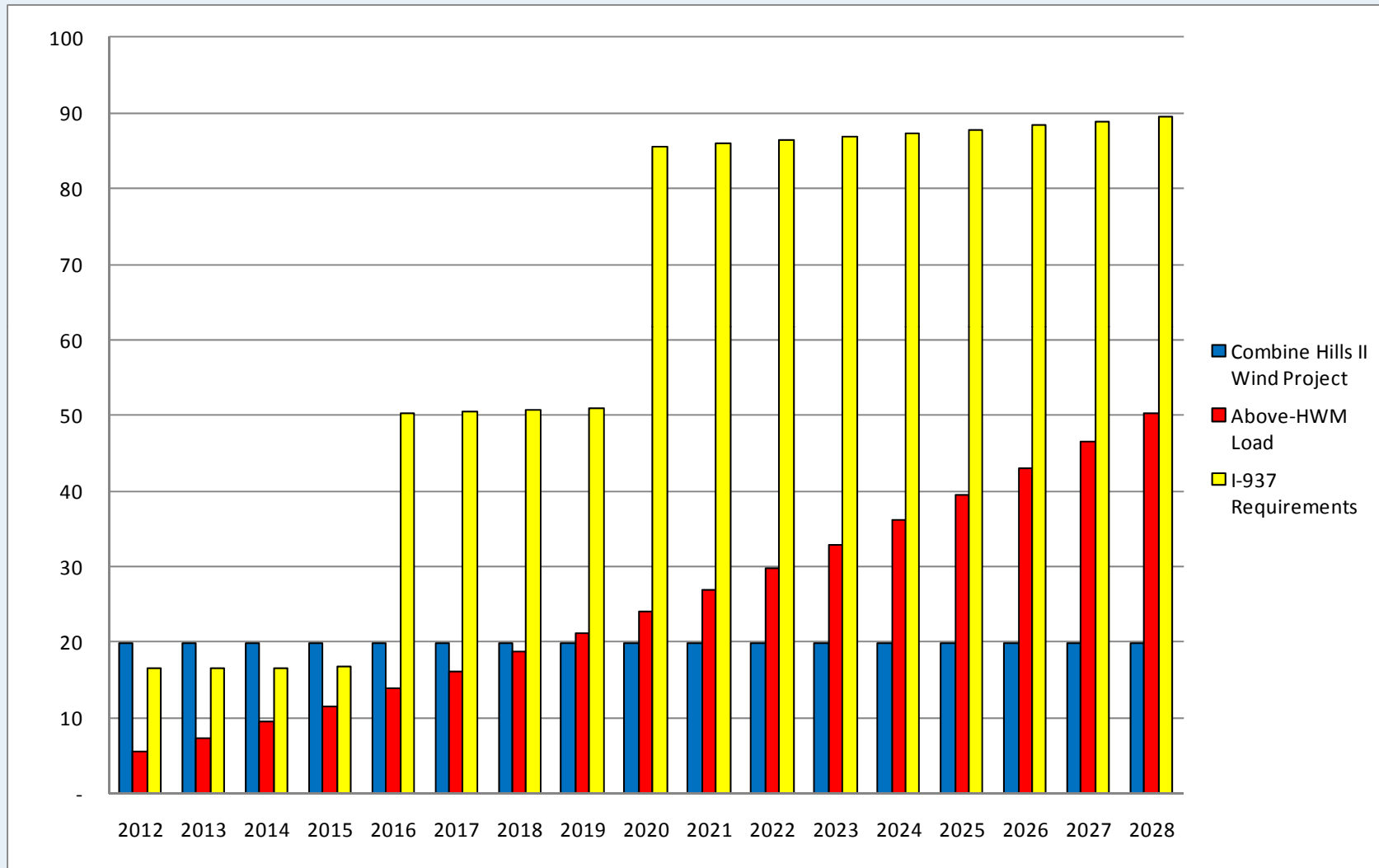
Risks and Key Criteria

- Resource acquisition risk
- Price Risk
- Customer notice/commitment risk
- I-937 Compliance Risk

Decision: Acquisition

- Combine Hills II (63 MW facility)
 - Experienced developer
 - Location
 - Sole off-taker
 - Shape of output
 - Availability
 - Timing and output (20 aMW)
 - Transmission

I-937 vs. Above-HWM Load with Estimated 6th Plan Conservation



A conservation potential study is currently underway that will more accurately determine CPU's conservation targets under the 6th Plan. The chart above is based on estimated targets.

Next Decision

- BPA Above-HWM Decisions
 - Must purchase only renewables to meet load growth
- I-937 Renewable Requirements for 2016
 - RECs because I-937 requirements exceed load growth expectations

Long Term Planning Realities

- **CO₂ Target Reductions Very Ambitious** = Steer Clear of Fossil-Fuels and Market Purchases But Also Take Out the Existing Baseload Fleet.
- **RPS Targets Very Ambitious** and Greater Than Load Growth
- **Reliability Standards Much More Strict** (Increases Complexity of Resource Integration)
- **Transmission System Constrained** (May be Difficult to Integrate Intermittent Resources Required to Meet RPS and CO₂ Targets)
- **Need to Maintain/Upgrade Existing Transmission** and Likely Build Substantial New Transmission (NIMBY) (Expensive, Very Long Planning Lead Time)

Long Term Planning Realities

- **Firming/Backing up Intermittent Resources (Expensive)**
 - Pumped Storage (Lots Of Talk)
 - Natural Gas Generating Plants (and You Still Have a CO2 Footprint).
- **Increased Natural Gas Prices** if Gas is the Transition Resource When Coal Plants are Shutdown
- **Changes to the FBS**
- **Lower Projected Reserve Margins**
- **Intermittent Resource Lack of Capacity**
- **Lack of Diversified Resource Approach**



Questions?