



**Industrial Sector**

Conservation Resources Advisory Committee  
January 28, 2015

Northwest Power and Conservation Council [nwcouncil.org](http://nwcouncil.org)

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The graphic features a stylized industrial facility with several tall smokestacks and buildings, set against a blue sky with white clouds and a green ground plane with two trees. The text 'Industrial Sector' is overlaid on a white rectangular box within the graphic.

## What Was in Sixth Plan?

- **Doubled potential compared with Fifth Plan**
- **63 Measures applied to 19 PNW Industries**
- **Nearly 800 aMW potential**
- **Most less than \$50/MWh**
- **A top-down methodology**
  - End use shares of electric load
  - Percent savings by measure by end use
  - Fraction incomplete
  - Measure interactions

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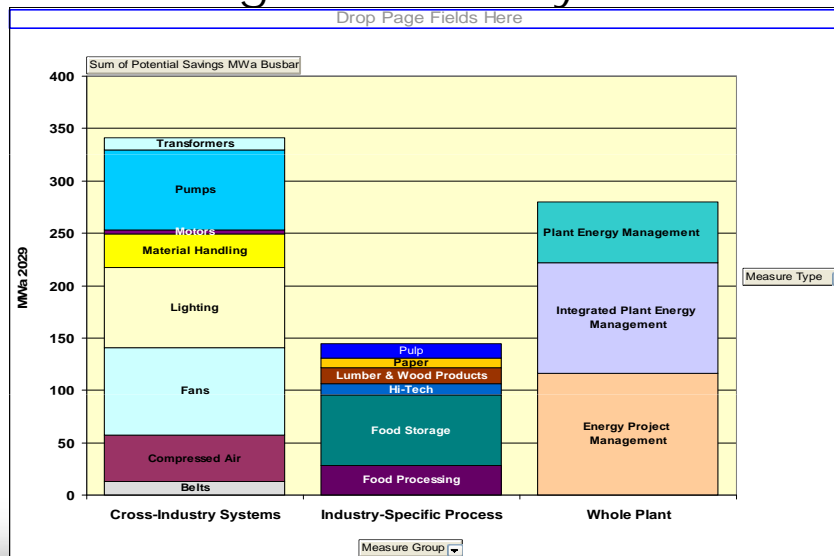
2

The slide contains a bulleted list of key findings from the Sixth Plan, presented in a clean, professional layout with a white background and a grey footer.

## Key Measure & Practices

- Air Compressor Demand Reduction
- Air Compressor Equipment
- Air Compressor Management
- HighBay Lighting
- Lighting Controls
- Motors: Efficient Rewind VSD Controls
- Motor Management Program
- Fan Efficient Centrifugal
- Food: Fans and Blowers
- Other: Fans and Blowers
- Fan ASD Control
- Premium Pump
- Pump ASD Control
- Transformers
- Synchronous Belts
- Food: Cooling and Storage
- Food: Refrig Storage O&M
- Metal: New Arc Furnace
- Paper: Medium Consistency Pump
- Mech Pulp: Refiner Replacement
- Mech Pulp: Premium Process
- Mech Pulp: Refiner Plate Improvement
- Kraft Pulp: Effluent Treatment System
- Kraft Pulp: Efficient Agitator
- Paper: Efficient Pulp Screen
- Paper: Premium Fan
- Paper: Material Handling
- Wood: Replace Pneumatic Conveyor
- Wood: Hydraulic Press
- Cold Storage Retrofit
- Cold Storage Tuneup
- Fruit Storage Refer Retrofit
- CS Retrofit -- CO2 Scrub
- CS Retrofit -- Membrane
- Fruit Storage Tuneup
- Groc Dist Retrofit & Tuneup
- Generic O&M

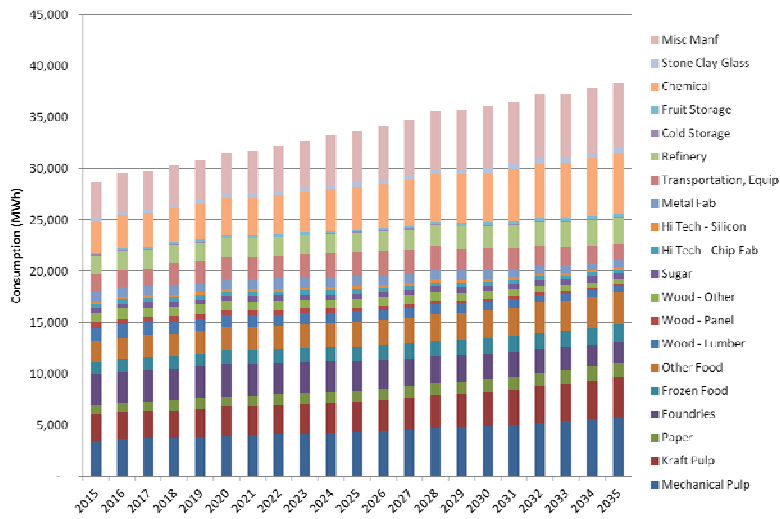
## 6P Savings Potential by Measure



## Seventh Plan Approach

- Use 6<sup>th</sup> Plan analysis structure, update parameters
  - Load forecast, by industry
  - End use shares, by industry
    - NEEA - Industrial Facilities Site Assessment (IFSA)
    - DOE – Manufacturing Energy Consumption Survey (MECS)
  - Saturation, by measure or end use measure group
    - Increase measure presence to reflect 2010-2015 achievements
    - BPA - 6 Going on 7 for 2010-2013 achievements, extrapolated for 2014 and 2015
  - Measure costs
    - Some BPA projects
    - Industrial Applications Center (IAC) database
  - Specific review of Compressed Air measures
  - Specific review of Energy Management measures
  - Remove Transformers – new Federal Standard addresses most potential, additional standards to come in 2022
  - If time permits
    - Add HVAC measures
    - Break out stone/clay/glass as new sub-industry

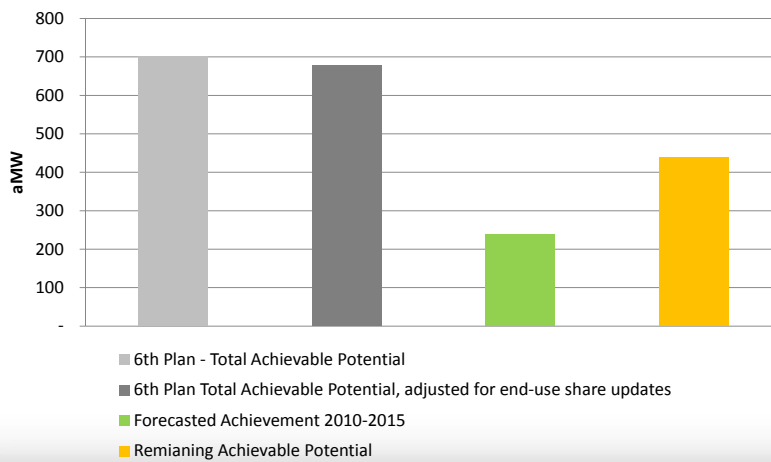
## Industrial Forecast

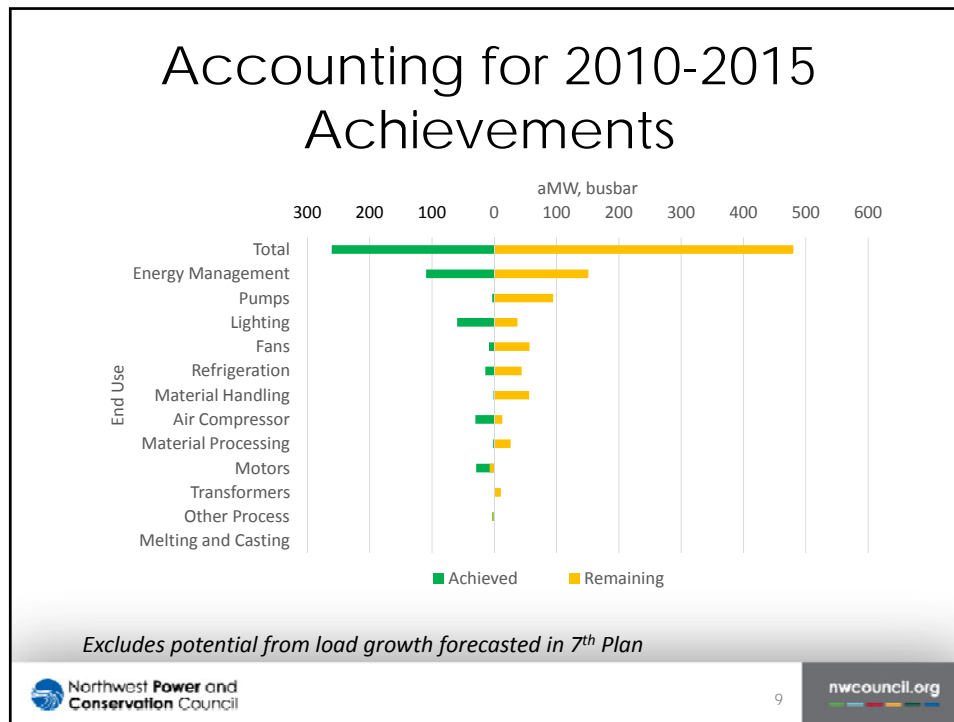


# Accounting for 2010-2015 Achievements

- **Analysis Steps**
  - **Remaining Potential at Existing Facilities**
    - = [6th Plan Potential] – [2010-2015 Achievements]
  - **Potential from Load Growth in 7<sup>th</sup> Plan**
    - 6<sup>th</sup> Plan approach, but with adjusted Saturations
    - Use 2035 load

# Accounting for 2010-2015 Achievements





## Next Steps

- **Finish cost updates**
- **Some measure savings updates**
- **Add new measures as time allows**
- **Incorporate review comments**
- **Build supply curves**