

# OTP Witness Bryan Morlock

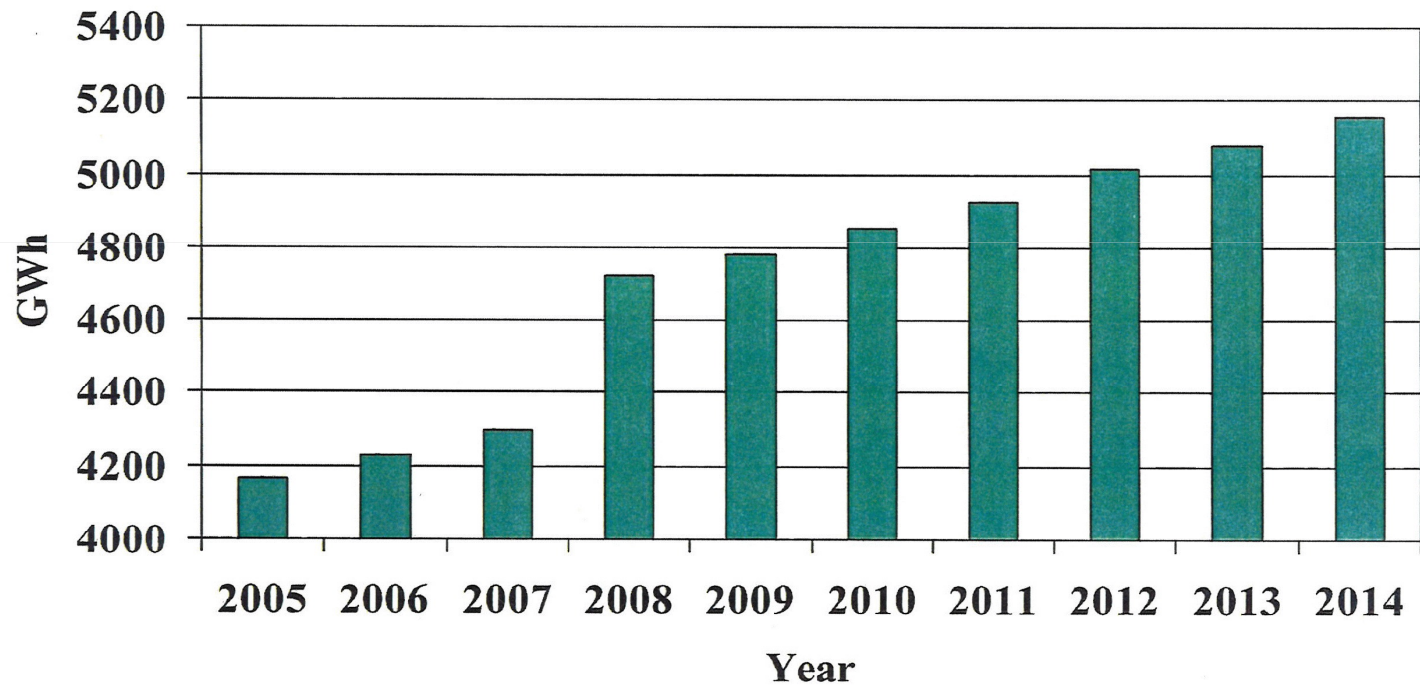
Manager of Resource Planning  
Otter Tail Power Company

Summary  
OTP Exhibits  
103,104,105,106,107,108,109,110 & 111

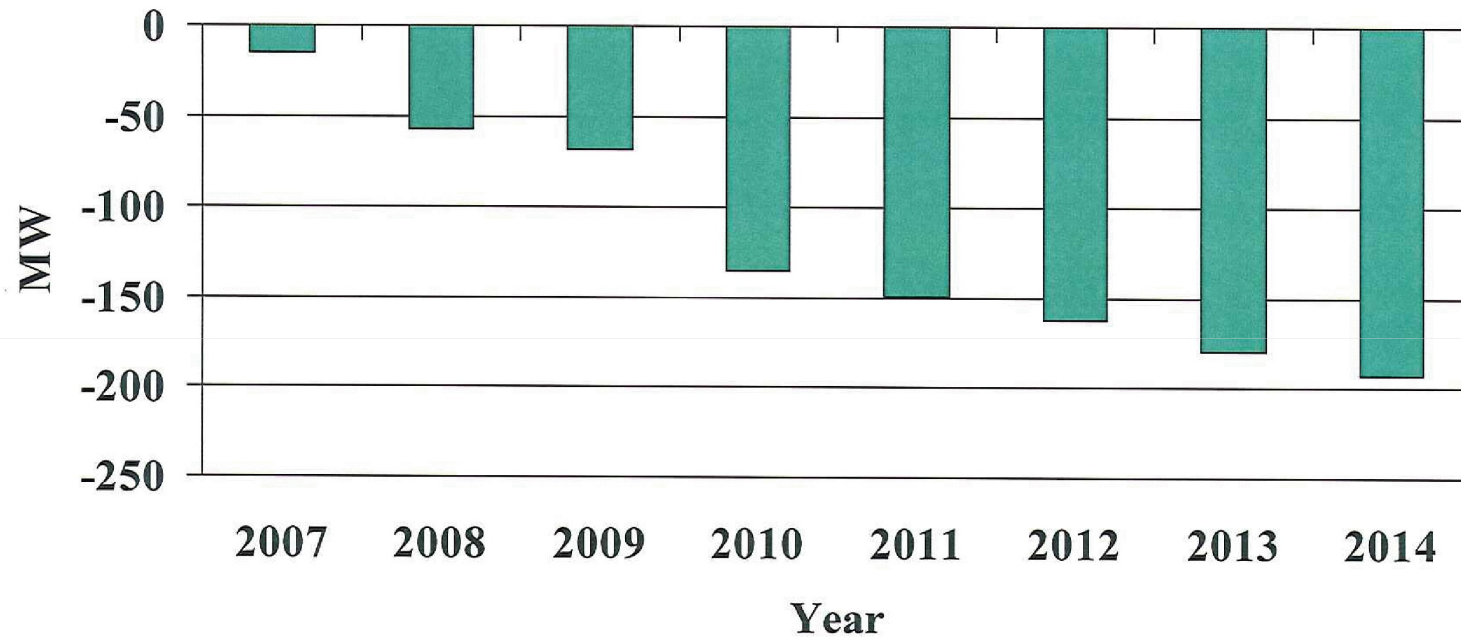
# Resource Planning

- Forecast Customer Energy and Demand Requirements
- IRP-Manager Capacity Expansion Model
  - Used for 15 years
- Forecasted Energy Growth
  - 2.4% per year 2005-2014
  - Increasing generation deficits

## OTP Energy Requirements Forecast



### OTP Summer Season Capacity Surplus/Deficit



# Big Stone II Not Satisfy Demand

- 67 MW Conservation
- 135 MW Natural Gas Peaking
- 160 MW Wind
- 50 MW Hydro Purchase
- 88 MW IGCC
  
- Small Amount Spot Market Purchases

# Wind

- 160 MW
- Transmission Constraints
- Power Purchases
- Production Tax Credit

# Manitoba Hydro

- Alternative to Big Stone Unit II
- Cost Differential
  - End Effects
- MH alternative does not provide any benefit to wind generation
- MH alternative does not expand the transmission system