

# WATER UPDATE

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# Construction of Facilities

## Approval Required

- PSC may require that no project proceed unless it certifies that public convenience and necessity require the project. Sec. 196.49(3)
  - Statutory cost threshold in sec. 196.49(5g)
  - Water utility threshold is \$250,000 or 25% of utility's operating revenues which ever is less
- Applies to the construction, purchasing, installing, modifying, replacing or placing into operation any plant covered unless an exemption applies. PSC 184.03(3)

# Water Project Exemptions

- PSC 184.03(4)
- Most installation, repair and replacement of utility mains
- *Routine meter* repair or replacement
- Installation, replacement or repair of SCADA systems
- *Replacement or repair of existing* pumps, motors, or associated equipment
- *Routine maintenance or repair* to utility facilities, including buildings used for utility purposes
- Narrow view of exemptions

# Routine Meter Replacements

- No technology upgrade allowed without approval
  - Manual read meter upgraded to AMR or AMI
  - AMR meters upgraded to AMI system
  - Irrelevant if meters no longer manufactured
- Replacement on an accelerated schedule not allowed without approval
- Cost threshold applies to multi-year program costs
  - Ex. Village of Vesper replacing manual read meters with AMR over a 20-year replacement period at a total estimated cost of \$60,500 (Docket 6110-CW-100)

# Replacement of Pumps and Associated Equipment

- Replacement of equipment may not result in an upgrade without approval
  - Approval required because upgraded equipment can be capitalized and increase the value of utility plant
- Ex. Village of Rothschild issued a reprimand for failing to obtain approval for:
  - Replacing low efficiency motors with high efficiency motors and variable frequency drives
  - Upgrading electrical equipment to comply with the National Electric Code
  - Docket 5180-WI-101

# Routine Maintenance

- *Substantial improvement to facilities* which goes beyond routine maintenance repair requires Commission approval
  - Evaluated on basis of nature, scope and cost of project
- Ex. City of Waukesha issued a letter of reprimand for failing to obtain approval for:
  - Replacement of parking deck located on top of maintenance building and garage
  - Rainwater leaking into offices below
  - Repairs to concrete deck, installation of rubberized asphalt waterproofing system, and other work
  - Cost \$655,000

# Review of Projects

- PSC must certify that public convenience and necessity require a project. Sec. 196.49(3)
- PSC may refuse to certify the project if:
  - Project will substantially impair the efficiency of the utility's service
  - Project will provide facilities unreasonably in excess of the probable future requirements
  - Project when in operation, will add to the cost of service without proportionately increasing the value or available quantity of service
- Conditions may be attached to the certificate to ensure that the project meets the requirements of the statute

# Oak Creek Case

- Docket 4310-CW-108
- Oak Creek applies for construction approval for a \$29.56 million water project
- New high lift and intermediate pump stations, new above ground storage, ultraviolet disinfection
- Designed to match capacity of existing treatment system – 30 mgd firm (with space to expand further)
- Half of water sold to City of Franklin who objects to project

# Focus on Probable Future Requirements

- Will project provide facilities unreasonably in excess of the probable future requirements?
- Demand study needed to forecast customer demand
  - 2008 study not sufficient
  - New demand study needed

# 2008 Demand Study Not Sufficient

- 2008 study supported 30 mgd design
- 2008 demand study was not persuasive
  - Actual water use lower than what was projected in 2008 study
  - Population growth has been slower than previously projected
  - Water use per person is declining
  - Reduced industrial water use from economy and conservation

# Recent Demand Study Needed

- New demand study needed
  - Study must reflect current population and demand trends
  - Study must reflect current economic conditions
  - Impact of conservation now and projected into the future must be taken into account
  - Period of study approx. 20 years in the future
  - Focus on existing service area
- High, medium and low growth scenarios should be evaluated

# Results of Recent Demand Study

- New demand study projected 2040 demand at:
  - 16.6 mgd at low usage scenario
  - 19.3 mgd at medium usage scenario
  - 21.9 mgd at high usage scenario
- High usage scenario assumptions
  - High rate of growth
  - Hot and dry summer
  - Lower unemployment rate
  - All opportunities for water efficiency exhausted by 2035

# Probability of Exceedance

- Likelihood of all four parameters for high growth scenario being in place at once is low
- Demand study included a probability evaluation
  - 0% chance of Oak Creek's current service area exceeding 22.8 mgd maximum day in 2040

# Acceptance of New Demand Study

- PSC finds new demand study represents a reasonable projection of Oak Creek's probable future demands
- Probable demand between 16.6 and 21.9 mgd

# Impact of Service Area Changes on Demand – New Customer

- Waukesha
  - Increase in demand if Oak Creek contracts to provide service to Waukesha
    - 29.1 mgd at low usage scenario
    - 31.8 mgd at medium usage scenario
    - 34.5 mgd at high usage scenario
  - Service to Waukesha still speculative
  - PSC find its it not reasonable to include Waukesha's demand in calculation of probable future requirements

# Impact of Service Area Changes on Demand – Existing Customer

- Franklin
  - Contract with Franklin expires in 8 years
  - Franklin indicates it may seek another source of supply
  - Since contract is in effect for another 8 years, Commission finds it reasonable to include Franklin's demand in the Oak Creek system demand

# Oak Creek Argues Project Not Unreasonably in Excess

- Facilities did not add additional capacity
- Facilities sized to match existing treatment plant
- Sizing the same allows customers to realize the full benefit of the existing plant
- Many components are long lived assets
- The cost of upsizing components now is lower than after construction of the plant is complete
- Oak Creek estimated cost differential at \$1.8M. Staff estimated difference at \$2.4M

# Staff's Position on Project Size

- Size of the project is bigger than probable future demand
- Looking at projects solely from an engineering perspective poses a risk of building capacity that results in stranded assets
- Inefficient to use ratepayer dollars to construct capacity larger than needed
- Spending more than needed could substantially impair the utility's ability to efficiently provide service at a reasonable cost

# DNR Compliance Issue

- Initial impetus of project to address DNR compliance issue with an existing CT tank
  - In compliance when built in 1970s; no longer meets standards
  - In 2008, during review of the plant expansion, DNR noted tank issues
  - DNR and Oak Creek agreed that issue would be resolved by 2018
- Current project addressed more than CT tank issues

# Compliance Issue Does Not Require Immediate Approval

- DNR has not started enforcement action
- Agreement to resolve by 2018 not set in stone
- No history of unsafe bacteriological samples
- While addressing issues before a health risk arises is important, Commission not convinced addressing the CT tank issues demand immediate approval of project
- Present project does much more than simply address CT tank issues noted by DNR

# Commission Denies Application

- Proposed project is simply larger than what is needed by existing customers
- Plant can be operated efficiently if smaller components (less than 30 mgd) are installed
- Installing larger components may result in the system having unused capacity and stranded assets
- Stranded capacity results in inefficient operation of the utility
- Unnecessarily increases costs borne by ratepayers

# Denial and § 196.49(3)(b)

- Excess cost and capacity will substantially impair the efficiency of the utility's service
- Project appears to provide facilities unreasonably in excess of the probable future requirements
- Commission does not address 3<sup>rd</sup> factor – whether project when in operation, will add to the cost of service without proportionately increasing the value or available quantity of service
  - Oak Creek had agreed to waive its \$1.8 million estimate of incremental costs until capacity used

# Oak Creek's 2<sup>nd</sup> Application

- Size of project will be reduced to 20 mgd
  - Within probable demand of 16.6 to 21.9 mgd
- No contract yet to sell water to Waukesha
- Wholesale customer Franklin expected to oppose application
  - Expected to argue that project goes beyond what is needed at this time

# Construction and Large Customers

- 3<sup>rd</sup> Factor for Construction Approval - §196.49(3)(b)
  - Commission may refuse to certify a project if it appears that the completion of the project will add to the cost of service without proportionately increasing the value or available quantity of service
  - PSC staff interprets this statute to mean that the cost causer, should bear the cost and risk associated with the proposed project

# Approval Conditions

- Conditions may be attached to a certificate for the project to ensure that the project meets the requirements of § 196.49

# Conditions Relative to Future Need

- City of Menomonie (Docket 3590-CW-103, 12/27/16)
- New well and other system improvements
- Prior to next CA request for a CA associated with a new source of supply, utility must conduct a detailed analysis of the need for the project
  - Description of how the project addresses projected future demand in the utility's service area
    - Demand estimates should be based on population and water use rates that represent reasonable projections of probable future conditions
  - Analysis of the risk associated with the loss of any large industrial customers including potential impacts to the water bills of existing ratepayers and the financial viability of the utility
  - Analysis of alternatives to new construction

# Conditions Relative to Future Need

- City of Menomonie (Docket 3590-CW-103, 12/27/16)
  - Analysis of alternatives to new construction
    - Assessment of the feasibility of reducing or delaying the need for a new source of water supply through
      - Improving the utility’s non-revenue water control program
      - Adopting a demand management program
      - Description of potential arrangements with neighboring communities, including emergency interconnections and other cooperative endeavors that help extend existing sources of supply
- See also City of Medford (Docket 3520-CW-103, 1/31/17)

# Other Approvals with Conditions on Future Needs

- Lake Hallie (Docket 2428-CW-104, 6/4/15)
- Hartland (Docket No. 2480-CW-103, 8/24/15)
- Fond du Lac (Docket No. 2010-CW-111, 9/25/15)

# Construction and Large Customers

- Necedah (Docket 4020-CW-104)
  - Requests approval to construct a new well and treatment facility to serve future expansion of ethanol production facility; estimated cost \$1.6M
  - PSC staff opines new facilities only needed to serve ethanol facility
  - Staff directs utility to draft a contract with the ethanol facility that guarantees the facility will either:
    - pay for the project upfront and contribute it to the utility, or
    - by guaranteeing to purchase enough water over the life of the loan (whether used or not) in order to recover the project cost
  - Staff notes that without this contract, Necedah's other 410 water customers will bear the risk of the new plant
  - Utility withdraws application

# Conditional Approval and Large Customers

- Whitehall (Docket 6500-CW-104)
  - Conditional approval for new well to meet higher demand of a new frac sand mining company
  - Before next CA request, conduct an analysis of risk associated with loss of or significant reductions in water use by large industrial customer
  - Provide a plan to address identified risks through
    - Establishing a water use agreement with either a lump sum or on-going payments in event of reduction
    - Requiring a bond from the industrial facility

# Questions?

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