

INFRASTRUCTURE PLANNING AND UTILITY ROADMAP

This presentation will outline a process that can lead to continuous improvement for campus utility systems. Periodic system condition assessments lead to capacity reviews, evaluation of utility rates, and identification of opportunities to improve reliability, prepare for growth, and reduce cost of service. Maintaining a matrix of priorities allows utility planners to work toward an end in mind. Strategies to gain institutional confidence and means to acquire funding are discussed. The 12 MSF University of Arizona campus utility operation serves as a case study for this planning process. With three interconnected chiller plants, two electric services, an underground tunnel steam distribution network, two cogeneration units and thermal energy storage, this system has undergone remarkable improvement in capacity, efficiency and reliability in recent years.

LEARNING OUTCOMES

1. Appreciate the importance of utility metering and establishment of routine operating metrics as planning tools.
2. Understand the value of a program to periodically assess campus utility system conditions, reliability, and cost of service.
3. Recognize opportunities to distill often complex campus utility data into simple graphics for use in preparing materials to articulate financial opportunities to the administration.

Steps

Assess

- Periodic Capacity Review Process
- Metering and Metrics
- Capacity, Reliability
- Condition- Remaining Useful Life
- Efficiency and Operating Cost Factors
- Establish Deficiencies
- Utility Cost Assessment
- Rate Evaluation
- Purchase Opportunities
- Establishing Internal Rates- True Cost of Utilities
- Cogen/Storage/Microgrid Considerations

Strategize

- Prepare for load growth
- Address deficiencies
- Improve economics
- Reduce carbon footprint
- Economic evaluation of alternatives
- Synergies

Acquire Funding

- Institutional
- Green Fund
- Utility Incentives
- ESCO

Implement

- Part of major capital improvement
- Incremental

APPA Webinar Series
May 1, 2018
11:00 – 12:00 PST

Presented by:
Christopher M. Kopach, CEFP, AVP, FM UA, APPA President
Henry Johnstone, PE. President GLHN Architects & Engineers, Inc.

