Adopt Revised Technology Policy: Regular Calendar
Director of IT Services: Ken Salmon

Adopt the Revised Technology Policy of the San Francisco Public Utilities Commission

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**Background:**

The SFPUC Technology Policy

The San Francisco Public Utilities Commission (SFPUC), by Resolution No. 12-0165, adopted the SFPUC Technology Policy in September 2012 after a review process that included input from the SFPUC Citizens Advisory Committee and the Commission. The overriding theme of the Technology Policy is that: “Beneficial Technologies are identified, researched, and analyzed, prior to proposals for full-scale implementation, such that ratepayer benefit is demonstrated, along with consistency with our Triple Bottom Line principles.”

The Technology Policy states that SFPUC should evaluate technologies with respect to four key principles:

2) Environmental Principles & Criteria.
3) Social Principles & Workforce Development Criteria.
4) Leadership Principles & Transparency Criteria.

**Technology Policy Governance and Implementation**

The SFPUC Business Technology Council (“BTC”) is responsible for implementation of the Technology Policy. Chaired by the Deputy General Manager and comprised of the SFPUC General Manager and Assistant General Managers, the BTC meets regularly and considers
recommendations developed by various subcommittees such as the Supervisory Control and Data Acquisition Working Group, Communications Working Group, IT Working Group and Security Council.

The SFPUC also partners with citywide, regional and national groups to coordinate and collaborate regarding emerging technologies and proven solutions. At the City level, the SFPUC actively participates in the City’s Committee on Information Technology (COIT), the Radio Steering Committee, the Financial System Steering Committee, and the eMerge Steering Committee.

Lastly, the SFPUC collaborates on technology issues with various national groups, including the Water/Wastewater Chief Information Officer Forum, American Water Works Association and Water Environment & Reuse Foundation, and holds regular meetings with regional utilities such as East Bay Municipal Utility District.

**Policy Assessment and Recommendations**

Overall, the Technology Policy reflects good governance and provides appropriate guidance for SFPUC’s technology investments. During the last Commission review of the policy at its meeting on January 12, 2016, staff highlighted a need to specifically address in the Policy the issues of information security and continuity of operations. The Commission discussion on January 12, 2016 also identified a desire to support greater compliance with the fourth key principle of the Policy, “Leadership Principles & Transparency Criteria.” After consulting with the BTC, staff now recommends the following changes to the Policy:

**Recommendation 1:**

Given the on-going series of highly publicized security breaches, add a provision to the Policy providing that SFPUC shall maintain a formal Information Security program based on national standards.

**Recommendation 2:**

Given the critical importance of and reliance on technology for SFPUC’s day-to-day and emergency operations, add a provision to the Policy providing that SFPUC shall develop and maintain a formal IT systems Continuity Of Operations (COO) plan to support continued operations during and immediately after a disaster.
Recommendation 3:

Update the Technology Policy’s “Leadership Principles & Transparency Criteria” to include a focus on technologies that support dramatic improvements in SFPUC service delivery and/or productivity.

Operational Changes

In addition to the three recommended changes to the Policy identified above, staff has worked with the BTC to propose some business practice changes and system development to support future compliance with “Leadership Principles and Transparency Criteria” policy. These changes will:

1) Establish a clear responsibility for keeping abreast of emerging technologies within each Enterprise.
2) Include a technology update for each Enterprise as part of the capital planning and budget process.
3) Create a collaborative SharePoint system that will allow SFPUC staff to:
   i. File formal reports about emerging technologies pilots using standard forms such as the Business Technology Council Business Case form or the SFPUC Project Charter form.
   ii. File informal reports on technology investigations that did not result in a pilot.
   iii. File reports on the major learnings from conferences attended and from visits to other utilities.
   iv. Use reports to prepare technology updates as part of the capital planning and budget process.
   v. Share ideas and challenges amongst interested staff through social media.

Result of Inaction: Existing September 2012 Technology Policy would remain unchanged.

Budget & Costs: There are no direct budgetary impacts.

Recommendation: SFPUC staff recommends that the Commission adopt the attached resolution.

Attachments: 1) Revised Technology Policy Dated November 14, 2017
WHEREAS, The San Francisco Public Utilities Commission (SFPUC) is a leading water, power, and sewer utility that serves customers and impacts stakeholders who expect reliability as well as the adoption of best management practices including innovation and the incorporation of cost-effective, sustainable technologies; and

WHEREAS, In September 2012, by Resolution No. 12-0165, the Commission adopted the Technology Policy of the SFPUC. The Technology Policy serves and guides the SFPUC as we consider beneficial technologies and innovation during the planning, design, construction and operation of critical investments, including physical plant assets, facilities, systems, processes and procedures; and

WHEREAS, At the January 12, 2016 meeting of the Commission, SFPUC staff highlighted the need to specifically address in the Technology Policy the issues of information security and continuity of operations; and

WHEREAS, After consulting with the SFPUC Business Technology Council, SFPUC staff now recommends updating the Technology Policy to (1) add a provision to the Technology Policy providing that SFPUC shall maintain a formal Information Security program based on national standards, (2) add a provision providing that SFPUC shall develop and maintain a formal IT systems Continuity Of Operations (COO) plan, and (3) include a focus on technologies that support dramatic improvements in SFPUC service delivery and/or productivity; now, therefore, be it

RESOLVED, That the San Francisco Public Utilities Commission adopts the Revised Technology Policy of the San Francisco Public Utilities Commission proposed at its meeting of November 14, 2017 and attached to this resolution.

I hereby certify that the foregoing resolution was adopted by the Public Utilities Commission at its meeting of November 14, 2017.

_________________________________
Secretary, Public Utilities Commission
TECHNOLOGY POLICY OF THE SAN FRANCISCO PUBLIC UTILITIES COMMISSION
(Revised November 14, 2017)

The San Francisco Public Utilities Commission (SFPUC or Commission) is committed to high quality, sustainable, reliable, around-the-clock delivery of Water, Power, and Sewer utility service to our customers and ratepayers. To ensure customer service excellence that takes advantage of innovative technologies, and consistent with the Commission’s Budgetary and Ratepayer Assurance Policies, practices, and endorsed Level of Service (LOS) goals, we will consider proven, as well as new and emerging technologies. Staff will identify, research, and analyze potentially beneficial technologies prior to proposal for full-scale implementation, and technologies will be implemented only where the technology is demonstrated to provide ratepayer benefit as well as consistency with Triple Bottom Line principles (social, environmental and financial). The Technology Policy will guide the management of, and be implemented for, operations and capital programs, covering physical plant assets, facilities, systems, processes and procedures.

The key principles and criteria shall include:

**Economic Principles & Criteria**

- Manage risk through the timely adoption of proven technologies that meet LOS goals;
- Consider small-scale demonstration projects and pilot studies prior to any large-scale proposals, when previously unproven technologies are involved;
- Assess compatibility of new technologies with existing facilities, and operations and maintenance capabilities;
- Assess costs using a total cost approach including transition costs and timing, capital cost, and projected long-term life cycle costs; and
- Explore grant funding for demonstration projects and larger-scale projects alike, including strategic partnerships with governmental and non-governmental agencies.

**Information Security and Continuity of Operations Principles & Criteria:**

- Maintain a formal Information Security program based on national standards. Include regular program reviews, improvements, comprehensive audits and remediations. Priorities are to protect customer/employee Personally Identifiable Information (PII) and protect the integrity of SFPUC operations; and
- Maintain a formal IT systems Continuity Of Operations (COO) plan to support continued operations during and immediately after a disaster. Give priority to data protection and to those systems that are critical to SFPUC operations. Include regular COO improvements, drills and remediations.

**Environmental Principles & Criteria**

- Seek technologies that optimize the sustainability and the conservation of natural resources;
- Consider long-term environmental impacts of proposed technologies, including the
mitigation of and adaptation to climate change and the wise use of our resources; and

Seek technologies that achieve regulatory compliance with all public health, environmental standards, and operational permits.

Social Principles & Workforce Development Criteria

- Evaluate technology alternatives for their contribution to the promotion of our Community Benefits Policy, including local jobs creation and retention in our service areas and community vitality, and to our Environmental Justice Policy;
- Provide staff development opportunities to ensure the SFPUC has well-trained and qualified staff to evaluate, implement and operate any new technology;
- Collaborate and partner with other utility professionals and organizations in the research, joint demonstration projects, and assessments related to new technologies; and
- Make the review and monitoring of new technologies a continuous part of staff development and job performance planning.

Leadership Principles and Transparency Criteria

- Identify the technologies in which the SFPUC has an interest, with an emphasis on technologies that result in dramatic improvements in service delivery and/or productivity;
- Invest staff and resources in innovative technology research, training, and industry initiatives;
- Participate in pilot studies to test and develop promising emerging technologies;
- Establish clear responsibility for keeping abreast of emerging technologies within each Enterprise;
- Document pilot study findings including costs, limiting factors, anticipated short-term and long-term developments, benefits and applicability;
- Include a technology update for each Enterprise as part of the capital planning and budget process;
- Incorporate a peer review process for critical technologies; and
- Provide a mechanism for submission of public comment and information requests, along with timely responsiveness and feedback.
The SFPUC Technology Policy

November 14, 2017

Ken Salmon, Director
IT Services
Technology Policy Background

- Adopted in September 2012.
- Overriding theme: “Beneficial Technologies are identified, researched, and analyzed, prior to proposal for full-scale implementation, such that ratepayer benefit is demonstrated, along with consistency with our Triple Bottom Line principles.”
- States that technologies be evaluated with respect to four key principles:
  - Economic Principles & Criteria
  - Environmental Principles & Criteria
  - Social Principles & Workforce Development Criteria, and
  - Leadership Principles & Transparency Criteria
Technology Policy Assessment

- Scope covers all types of technology, not just IT
- Reflects good governance and provides appropriate guidance for technology investments of the agency
- Re-evaluated in 2017 in light of current business needs and security challenges
- Recommend three policy changes approved by BTC
- Recommend improvements and tools to further operationalize the Technology Policy
Technology Policy Recommendations

Recommendation 1

• Given the on-going series of highly publicized security breaches, specifically incorporate Information Security considerations into the Technology Policy.

Recommendation 2

• Given the critical importance and reliance on technology for day to day and emergency operations, incorporate considerations for IT Continuity of Operations into the Technology Policy.
Technology Policy Recommendations

Recommendation 3

• Update the Technology Policy’s “Leadership Principles & Transparency Criteria” to include a focus on *transformational* technology that supports dramatic improvements in service delivery and/or productivity.
Recommended Improvements

• Establish a clear responsibility for keeping abreast of emerging technologies within each Enterprise.
• Include a technology update for each Enterprise as part of the capital planning and budget process.
• Create a collaborative SharePoint environment for Staff to document pilots and share ideas.