

EFAB Capital Projects Affordability Charge: Listening Session Framing Document

From the [EFAB Water Affordability Charge](#):

CAPITAL PROJECTS: The agency asks EFAB to conduct a high-level exploration of types of capital projects that could address local water service needs that are innately less burdensome on local ratepayers. For example, large-scale water use efficiency measures as an alternative to a more expensive new pipeline. This objective will not involve a comprehensive study of such alternatives but will address how consideration of infrastructure investment choices can be broadened to include unconventional options that are more affordable for the whole community while still solving for the water infrastructure challenges (e.g., water supply, treatment, stormwater capture, etc.). The deliverable would ideally include a survey of the types of capital projects that have already been shown to have substantial promise as alternatives and supplements to conventional water systems, such as green stormwater infrastructure and technologies aimed at reducing system leaks.

This element of EFAB's water affordability charge recognizes that utility infrastructure decisions, and how those investments will be made over time, fundamentally shape the affordability of water services. The capital intensity of providing drinking water, wastewater and stormwater infrastructure functionality is increasing and will continue to exacerbate affordability challenges. The Workgroup views this issue as a vital opportunity to explore pathways to optimize water infrastructure life cycle costs through the lens of affordability. To support this exploration, EFAB is holding a public listening session on Tuesday, February 20 to gather relevant lessons learned, case studies, and generally tap into the experience of the community. We have so far identified 5 courses of action with substantial potential to reduce the cost -- and often to increase the climate resilience -- of water infrastructure.

To guide the listening session, we have prepared several questions associated with each of the key topics identified as listed below:

1. **Innovation.** Investments in innovative strategies and solutions that could reduce costs at larger scale, i.e., that deliver water infrastructure services more cost effectively, or provide greater/multi-benefits, than conventional approaches. This can include, for example, green and nature-based infrastructure as well as tech innovation and distributed and/or modular systems.

Listening session questions:

- What are the types of green, distributed, and/or tech innovation that are most promising from a reduced life cycle cost perspective?
- Where are the gaps in research regarding the life cycle costs of tech and nature-based water infrastructure solutions in comparison with conventional systems?
- Where are their gaps in practice and research regarding the development and application of Benefit-Cost Analyses to water infrastructure projects?
- What is the role of the financing in connection with reducing the life cycle costs of innovation?

2. **Multi-benefits analysis.** Expanding consideration of the types of benefits that can be provided by water infrastructure to leverage unconventional sources of capital (e.g., green infrastructure can provide public health, local greening, and other benefits that can tap into non-water utility sources of funding).

Listening session questions:

- What is the best research in the field on incorporating multi-benefits analysis into water utility investment decisions?
- What kind of impact is a multi-benefits decision-making model likely to have on water sector affordability (if we have enough information to estimate)?
- What factors should (or can) be included in a multi-benefits analysis, and where are there gaps in the use of those factors.
- Are there good case studies of utilities or municipalities having success with this approach either in the water sector or other public services?
- Are there examples of monetizing multi-benefits to generate revenue streams to help pay for the infrastructure delivering those multi-benefits?

3. **Consolidation/regionalization of small systems.** Maximizing economies of scale through consolidation and/or regionalization of water infrastructure investments, when appropriate.

Listening session questions:

- Where are the best examples of how consolidation has produced lower capital costs?
- What range of options exist for consolidating or developing regional partnerships to reduce costs?
- What are the best research papers addressing the financial benefits, and challenges, of regionalization or consolidation of water infrastructure?
- What are the key enabling conditions necessary for consolidation to produce strong financial benefits for water consumers?
- What measures can or should be used to evaluate proposals for consolidation or regionalization of water infrastructure.

4. **Gains from trading or other market-based approaches,** such as stormwater credit trading or nutrient trading that can meet outcomes at lower cost.

Listening session questions:

- Where and under what circumstances do trading regimes perform best to meet water quality outcomes?
- Can we identify optimal regulatory regimes needed to ensure accountability and performance for trading programs?
- What are the best-case studies demonstrating that trading programs can reduce consumer costs?
- What kind of systems can be used to guarantee that credits are honored?

5. **Aligning financial incentives. Creating stronger shared incentives to deliver water infrastructure more efficiently;** e.g., new procurement models; alternative delivery approaches providing financial incentives for meeting performance targets.

Listening session questions:

- What are the best case studies demonstrating how approaches that realign incentives can be structured successfully (and perhaps also where they have failed)?
- In what circumstances do these models work best and where are they less likely to be a strong fit (e.g., larger projects vs smaller; conventional centralized infrastructure vs nature-based)?
- What data, case, studies, or examples are available demonstrating the life cycle cost savings to water consumers of these approaches?
- Have lack of incentives created a communication or knowledge gap in the access of capital for water infrastructure projects because of the skewing of the process towards mid and large size utilities?