

Long-term System Planning and EPCOR's Integrated Resource Planning Process

Since 1997, EPCOR has used the Integrated Resource Plan (IRP) planning approach to identify and implement capital and operational improvements to the water system. The IRP process has now been extended across the water-cycle utilities EPCOR operates. Recent IRPs presented to Utility Committee and informed by public engagement include:

- Stormwater IRP (SIRP) (2018): A 20-year plan to protect Edmonton from flooding during extreme weather events. The plan is built on a risk ranking model that was driven by public input, with specific targets for the highest flood protection priorities identified by Edmontonians.
- Gold Bar IRP (2019): A 40-year capital and operating plan for wastewater treatment, designed based on shared outcomes and design criteria developed with community stakeholders.
- Water IRP (2020): A long-term plan for Edmonton's drinking water system, informed by the ongoing input of a Public Advisory Committee and project and facility-specific stakeholder input.

The IRP process is dynamic, and informed by new information and input. Plans are continuously updated using a holistic approach that considers the following factors:

- Influences of external parties on operations;
- Varying approaches to operations;
- Operational risks;
- New technology; and
- Capital improvements to the existing system.

This approach results in greater efficiency in the planning and construction of capital infrastructure expansions, ensuring that decisions are made based on the best information available at the time, and assets are built as and when they are needed.

Sanitary Integrated Resource Planning Process:

The Stormwater IRP was the first of two plans EPCOR has been developing for Edmonton's drainage system since the transfer of that utility in the fall of 2017 and has become nationally recognized as a leading practice in flood mitigation and public engagement. The second plan – the Sanitary IRP – is now in

development, backed by a consolidated “One Water” planning team within the utility.

The SanIRP will provide a holistic and integrated long range plan for the sanitary wastewater system to ensure the long term operational, environmental and financial sustainability of the utility. The planning goals are to:

- Develop a cost-effective and resilient wastewater infrastructure master plan based on current design assumptions to plan for the future growth and redevelopment of the city; and
- Through a One Water approach, develop an integrated long term strategy to provide resilient and sustainable wastewater services.

Specific actions within this work include:

- Plan for future growth: revitalize and revise large sanitary trunk plans for the sanitary trunk network, and investigate alternative wastewater management approaches.
- Plan for infill and neighborhood redevelopment: determine the servicing approach in infill areas to guide city densification objectives.
- Understand the impact of water conservation on sewage generation and characterization
- Optimize the corrosion and odour reduction strategy initiatives
- Optimize proactive risk-based asset management to drive capital planning
- Implement inflow and infiltration reduction
- Develop climate change adaptation and mitigation strategies
- Utilize advanced technology to improve the understanding of system operation
- Energy optimization and renewable energy.

Public engagement by EPCOR will continue to be essential to the planning process – particularly during the development of the IRP’s goals and strategies.

While the IRP process is dynamic, at five year intervals EPCOR will present and report on the IRP to Utility Committee. This provides Councillors and the public a structured and transparent process through which to review and test the plan, and provide feedback.

The IRPs inform the development of the multi-year rate filings by each EPCOR utility. Through this Performance Based Regulation process, both Utility Committee and Council review and approve the capital and operating plans, revenue requirements, rates and performance measures for the utilities.