Utilities

Introduction

Utilities are basic functions that keep the city working. As a highly urbanized area, Seattle has a fully developed and comprehensive utility infrastructure system that provides energy, drinking water, water for fire suppression, drainage, sewer, solid waste, and communications services throughout the city. These services are provided by diverse public and private providers that must share space within the street right-of-way. Seattle City Light provides electricity throughout the city and beyond the city boundaries. Seattle Public Utilities provides drinking water, drainage, sewer, and solid waste services within the city limits. In addition, it provides water service directly or indirectly to much of King County. King County also provides combined drainage and sewer services in portions of Seattle and is responsible for treating all wastewater generated in the city. The City's Department of Information Technology maintains an extensive data and fiber optic network, shares conduit installation and maintenance with multiple partners, and leases excess fiber capacity to private providers.

Investor-owned utilities also serve Seattle, providing natural gas, district steam, and communications infrastructure and services. Additionally, various companies operate wireless communications facilities such as television, radio, and cellular phone towers and antennas. The City has limited control of private utilities as the regulator for public right-of-ways. Agreements with cable companies help ensure technical quality, customer rights and support public services.

Over the coming years, as Seattle continues to grow, the existing utilities infrastructure is well poised to accommodate new buildings, although some development strategies and construction modifications may be required to bring services to individual lots. The infrastructure will also be able to support the Plan's broader goals of sustainability, economic efficiency, and equitable service access for all Seattleites.

The utilities will need to address historic conditions and changing needs, technologies, and other factors in order to thrive over the next twenty years. The electrical system will have to increase capacity and reliability to adapt to emerging technologies such as local solar energy production and electric vehicles, while continuing to address climate change and maintaining a significant distribution system. The drinking water, drainage, and sewer systems will have to respond to new goals and regulatory mandates for water quality and the impacts of a changing climate. At the same time, the Drainage and Wastewater Utilities need to update historic systems that have produced combined sewer overflows and degradation of creeks. The communications systems will need to grow to continue to address City, business, resident, education, health, service sector and mobile communication needs.

Future investments will need to contribute to the City's vision of achieving race and social equity by ensuring the burdens and benefits of high quality utilities infrastructure are distributed equitably

throughout the city. Seattle's infrastructure investments will need to help rectify existing environmental and service disparities and support the health and economic opportunity of underinvested communities, which are disproportionally impacted by environmental contaminants or lack of service such as high speed Internet services and training.

The Utilities Element outlines goals and policies that will guide City decisions about providing services and addressing emerging issues the utilities face. An inventory of existing infrastructure and forecasted future needs for City-owned utilities are discussed in this element's appendix. The capital programs planned over the next six years are included in the City's most recently adopted Capital Improvement Program (CIP). In addition, though this element focuses on how the City operates its own utilities, it also extends the discussion to how we influence non-city utilities, such as communications, natural gas, and district steam.

Service Delivery

Discussion

It is critical for the utilities to plan strategically for investing resources to maintain and improve service delivery within finite physical and financial resources available. Decisions we make today will have long-term implications for our ability to serve a changing population. This section describes the overarching goals and policies that apply to all aspects of service delivery.

GOAL

UG1 Provide safe, reliable, and affordable service that is consistent with the City's aims of environmental stewardship, race and social equity, economic opportunity, and the protection of public health.

POLICIES

U1.1 Provide equitable levels of service by accounting for existing community conditions, considering how decisions will impact varied geographic and socioeconomic groups, and embedding service equity criteria into decision-making processes.

U1.2 Coordinate planning, programs, and projects for City utilities with those of other City departments to lower costs, improve outcomes, and minimize construction and operational impacts.

U1.3 Strive to develop a resilient utility system where planning and investment decisions account for changing conditions, such as climate change, technological changes, increased solar energy generation, and natural disasters.

U1.4 Support innovative approaches to service delivery, such as the development of distributed systems or joint ventures by city and non-city utilities, where they could further overall goals for utilities.

U1.5 Ensure that new private development provides adequate investments to maintain established utility service standards.

U1.6 Make utility services as affordable as possible through equitable delivery of utility discount programs and incentives.

U1.7 Leverage investments and agreements with private utilities and vendors to create training and living wage job opportunities, particularly for low-income and local residents.

U1.8 Support proactive asset management programs for the renewal and replacement of utility infrastructure to ensure compliance, safety and reliability.

Utility Resource Management

Discussion

Natural resources such as water, fuel, hydropower capacity, and materials comprise the basic inputs and outputs of every utility. The issues of energy supply, water supply and disposal, and waste management are essentially about how these resources are used, changed, and released. While the City has adequate existing capacity to provide electricity, drinking water, and waste disposal over the next twenty years, proper stewardship of these resources is vitally important for meeting the utilities' key goals such as reducing impacts on the environment and preparing for climate change and a growing population.

This section describes how the utilities manage energy supply, water supply and disposal, and materials to make the most effective use of these resources.

GOAL

UG2 Maximize the conservation of potable water, drainage function, electricity, and material resources by the utilities and their customers.

POLICIES

U2.1 Use cost-effective demand management to meet the City's utility resource needs and support such practices by wholesale customers of City utilities.

U2.2 Consider short-term and long-term environmental and social impacts related to acquiring and using natural resources.

U2.3 Remain carbon neutral in the generation of electricity by relying first on energy efficiency, second on renewable resources, and, when fossil fuel use is necessary, offsetting the release of greenhouse gases.

U2.4 Strive to be carbon neutral in the delivery of drinking water, drainage, sewer, and solid waste services.

U2.5 Pursue the long-term goal of diverting most of the city's solid waste away from landfills by maximizing recycling, reducing consumption, and promoting products that are made to be reused, repaired or recycled back into nature or the marketplace.

U2.6 Prevent pollutants and high flows from damaging aquatic systems by minimizing impervious surfaces, minimizing stormwater runoff, reducing contamination of street runoff and storm water, addressing combined sewer overflows, and minimizing illegal discharges into water bodies.

U2.7 Provide opportunities for margionalized populations to participate in conservation programs.

Utility Facility Siting and Design

Discussion

New substations, reservoirs, pump stations, green stormwater facilities, treatment facilities and other utility infrastructure represent substantial long-term investments. Increasing capacity and changes in demand in parts of the City may necessitate the addition of new utility facilities in some cases. Since the location and design of these facilities can have major impacts on the long-term cost and effectiveness of service provision, it is important to consider a wide range of perspectives in making these decisions. This includes how potential locations may impact the efficiency of operations, equity of service provision, environmental consequences, and our ability to serve a growing population as well as existing conditions such as the historic concentration of large polluting industries and utility operations in areas that also house low income, racially diverse communities. By considering a range of desired outcomes for new facilities, the City can also design facilities that meet a broad range of utility goals.

The following policies address the siting and design of Seattle's utility facilities.

GOAL

UG3 Site and design facilities so that they help to efficiently and equitably provide services to all Seattleites and maximize their value within the communities where they are located.

POLICIES

U3.1 Consider and budget for the potential operation and maintenance costs of new facilities when developing them.

U3.2 Discourage siting and design alternatives that may increase negative impacts, such as traffic, noise, and pollution, particularly on communities that already bear a disproportionate amount of these impacts.

U3.3 Apply consistent and equitable standards for the provision of community and customer amenities when they are needed to offset the impact of construction projects, ongoing operations, and facility maintenance practices.

U3.4 Build facilities that are models of environmental stewardship by maximizing energy, water, and material efficiency, maximizing on-site stormwater management, prioritizing local and environmentally preferable products, and minimizing waste.

U3.5 Consider opportunities for co-locating facilities, allowing mixed-use development, or creating accessible open space when siting and designing utility facilities, provided doing so would still allow for safe and secure utility operations.

U3.6: Consider future climate conditions during siting and design, including changes to temperature, rainfall, and sea level, to help ensure capital facilities function properly as intended over their planned life-cycle.

Coordination within the Right-of-Way

Discussion

Above, below, and on the ground, Seattle's roads, paths, and other right-of-way spaces contain a vast array of utility infrastructure. Pipes, conduits, wires, poles, service vaults, storage tanks, pollution control structures, streetlights, gutters, swales, and infiltration facilities are carefully integrated into the City's overall landscape. Due to limited space, however, the way these facilities are placed and maintained must be carefully managed in order to minimize conflicts between the utilities and other uses of the right-of-way, as well as to make sure that infrastructure investments are well maintained.

At the same time, new investments in these facilities, particularly projects that result in opening the pavement, also provide opportunities to improve existing facilities and meet multiple objectives. Consequently, the City should look for opportunities to share costs, undertake joint projects, or otherwise consider the goals of other departments when undertaking projects in the right-of-way.

GOAL

UG4 Coordinate right-of-way ventures among departments to meet transmission, distribution, and conveyance goals; minimize the costs of infrastructure investment and maintenance; control stormwater; and support other uses such as transportation, trees, and public space.

POLICIES

U4.1 Engage in early coordination and collaboration among departments on transportation and utility projects in the right-of-way to avoid space conflicts, identify joint project opportunities, and minimize life-cycle costs across all City departments.

U4.2 Coordinate construction to ensure minimal cost and public inconvenience in terms of road and right-of-way disruption.

Relationships with Non-City Utilities

Discussion

Communications with non-City utilities, such as natural gas, district steam, and communication providers, take place primarily through the review of street use permits, project coordination, development and leasing policies, and the execution of franchise agreements or programmatic term permits. These relationships offer opportunities to improve service provision for customers, reduce the impacts of construction, and encourage non-City utilities to work toward City goals. Specific policies about the location of communication facilities are included in the Land Use Element. The following policies address the operation of non-City utilities in Seattle generally.

GOAL

UG5 Work with non-City utilities to promote the City's overall goals for utility service and coordinated construction within the right-of-way.

POLICIES

U5.1 Provide interested non-City utilities with timely and effective notices of planned road and right-of-way trenching, maintenance, and upgrade activities.

U5.2 Support competition among private providers by providing equitable access to the right of way for all data and telecommunication service providers to reach their customers.

U5.3 Encourage improvements in the communications system to achieve the following:

- Universal and affordable access for residents, businesses and institutions within Seattle, particularly for marginalized populations
- Customer options and competitive pricing
- Consumer privacy, system security, and reliability
- State-of-the-art services.