The Seattle 2030 District

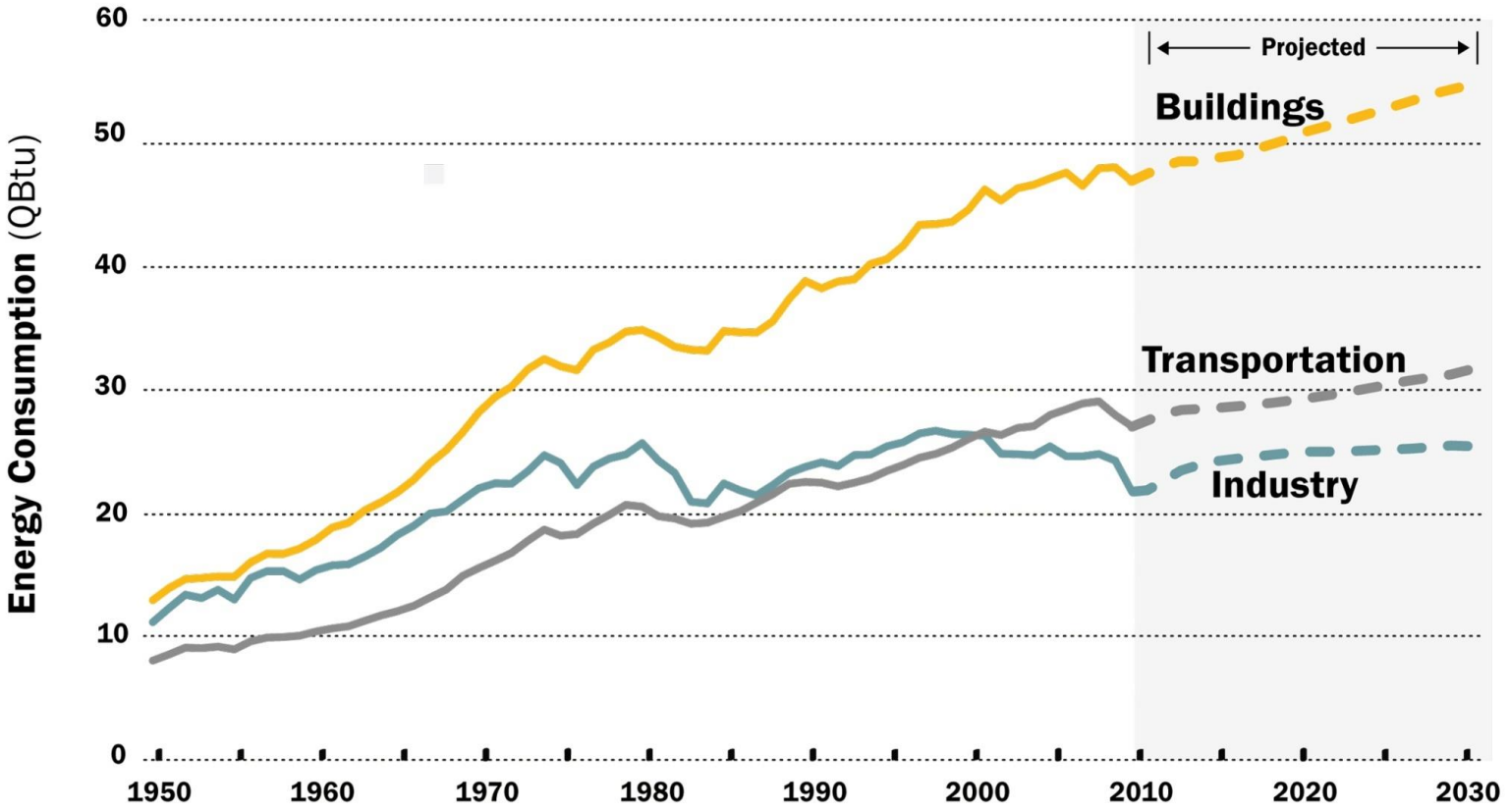
The Rise of a District

Matthew Combe

Program Director

SEATTLE
2030
DISTRICT

The National Context



U.S. Energy Consumption by Sector (Historic / Projected)

Source: ©2010 2030, Inc. / Architecture 2030. All Rights Reserved.
Data Source: U.S. Energy Information Administration.

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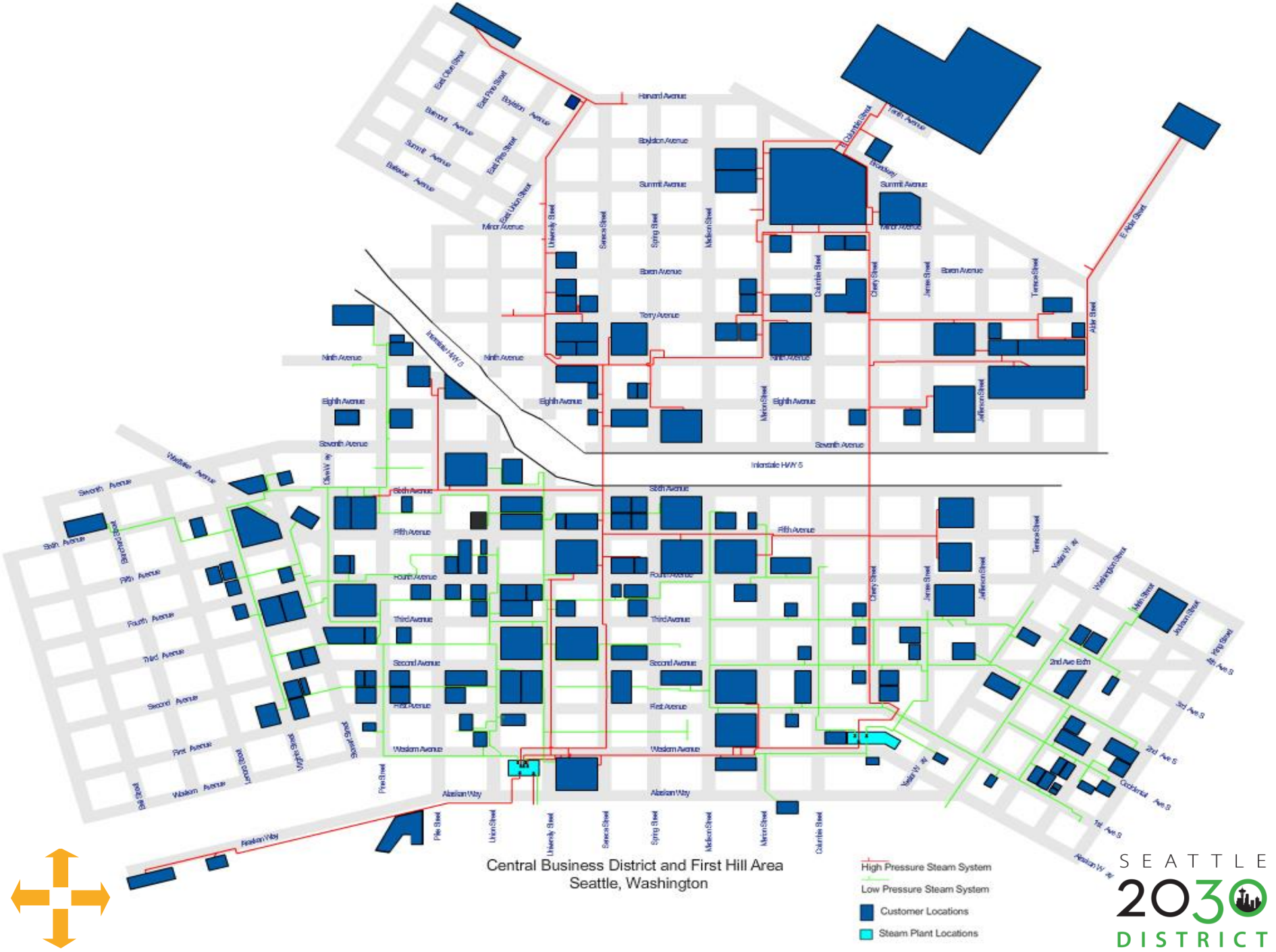
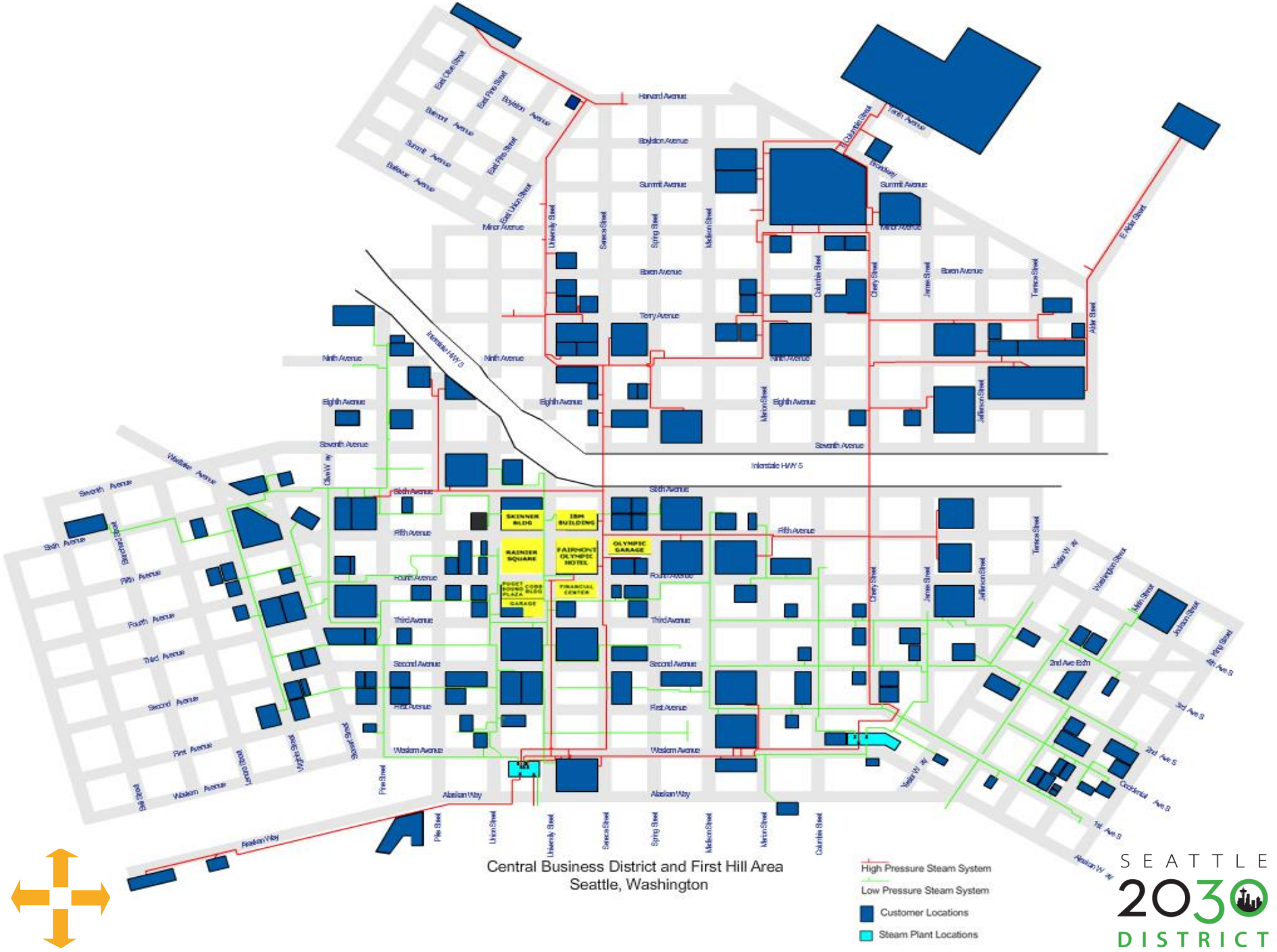

Central Business District and First Hill Area
Seattle, Washington
High Pressure Steam System
Low Pressure Steam System
Customer Locations
Steam Plant Locations
SEATTLE
2030
DISTRICT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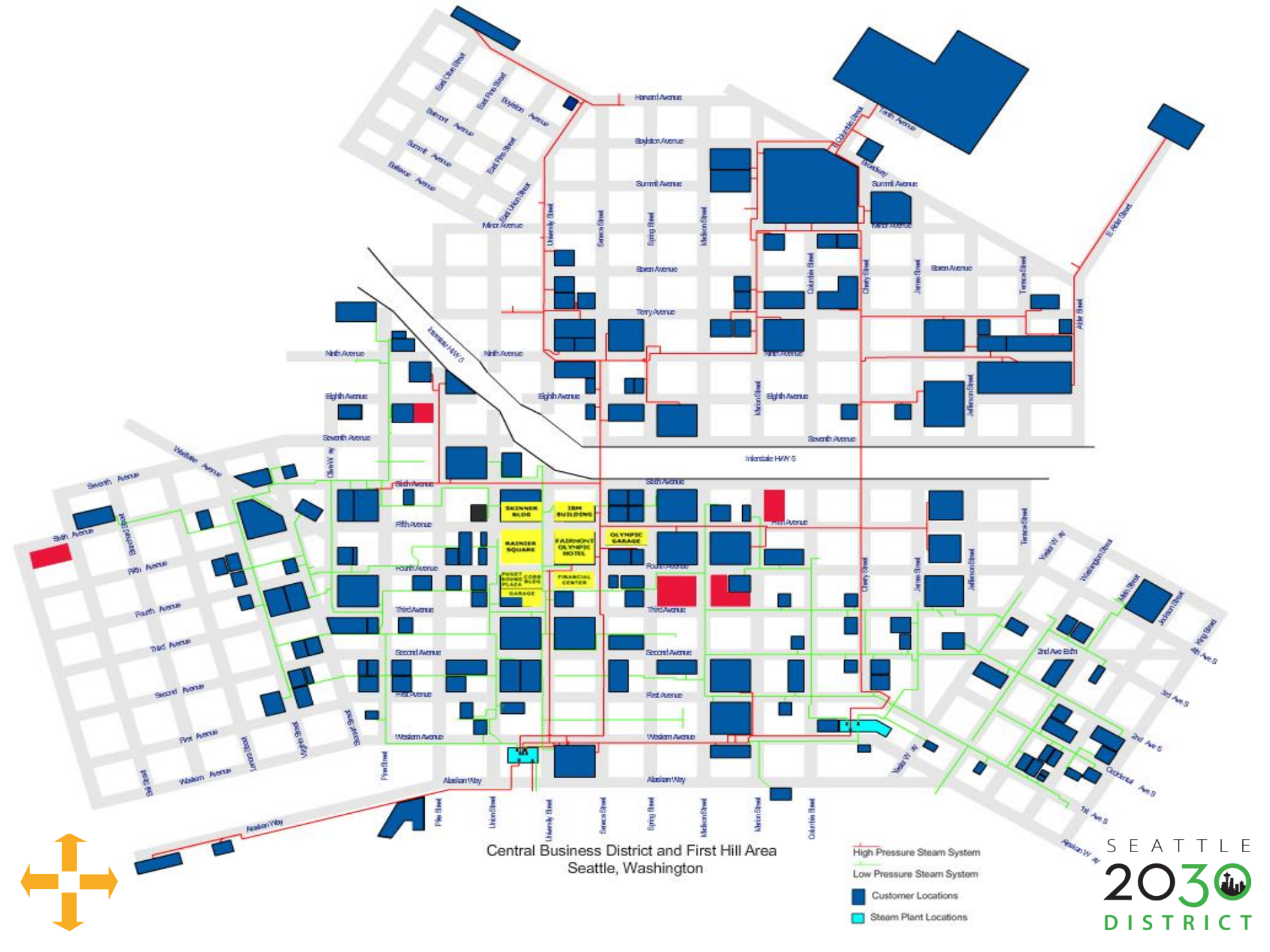
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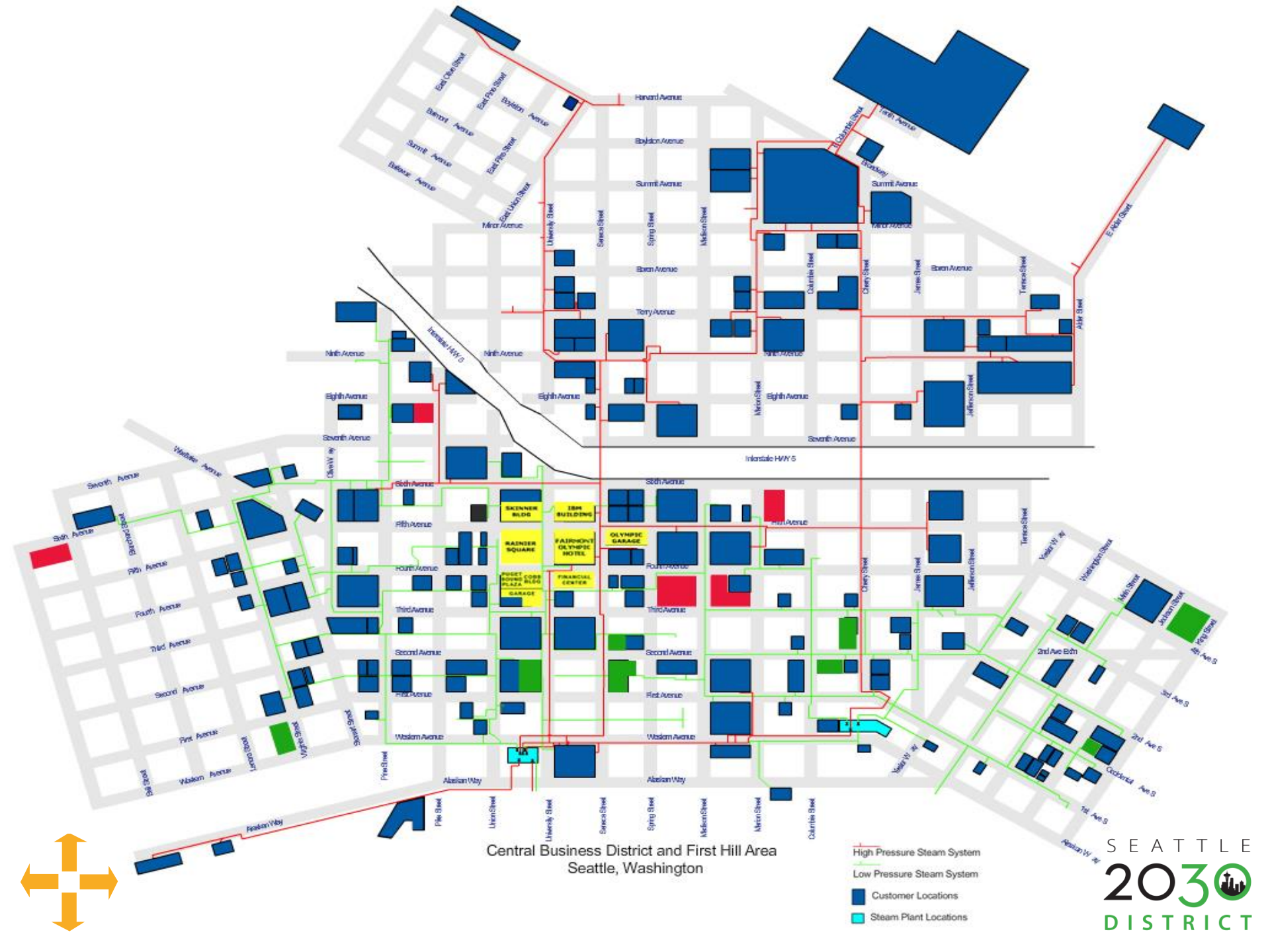
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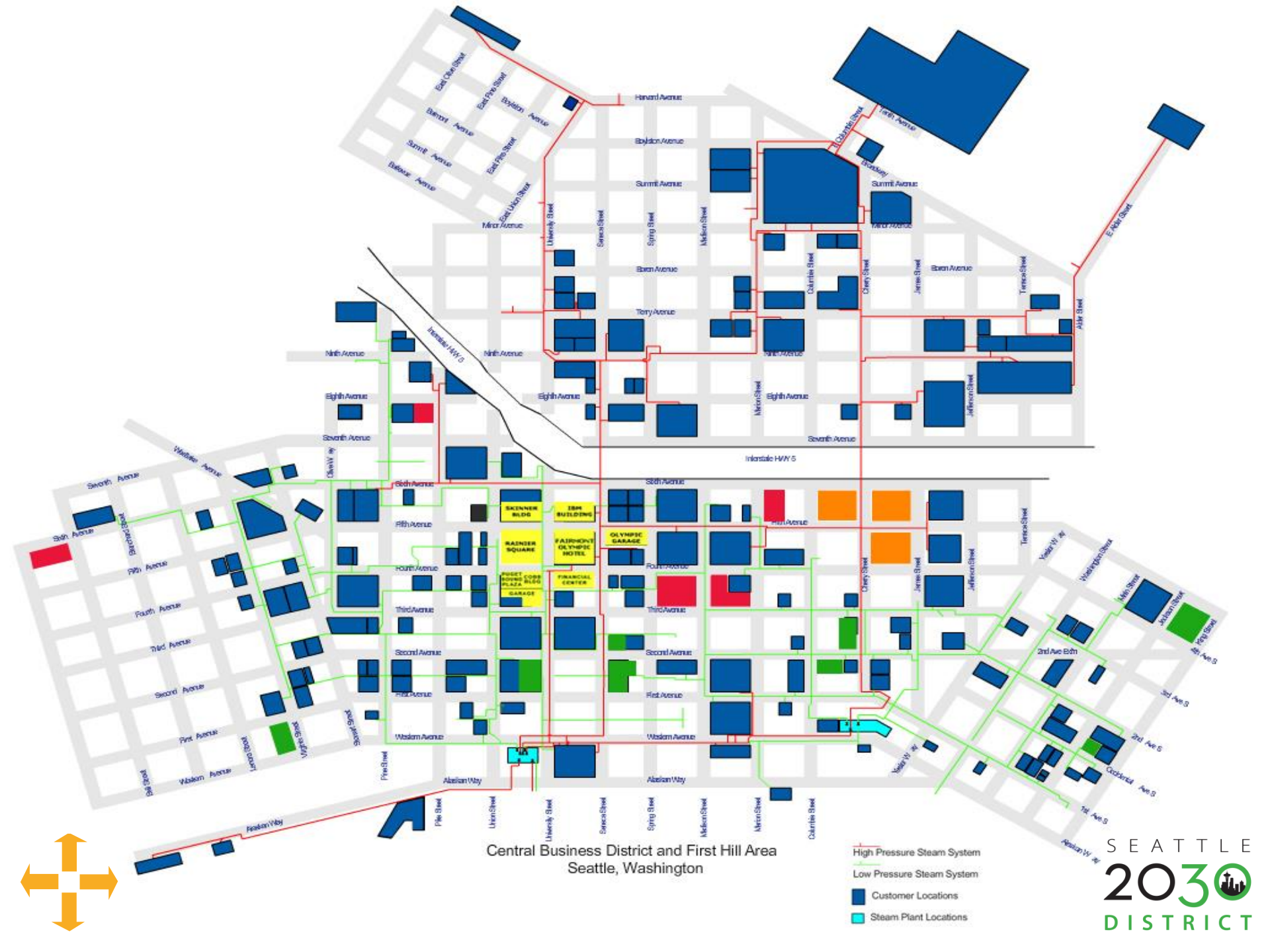
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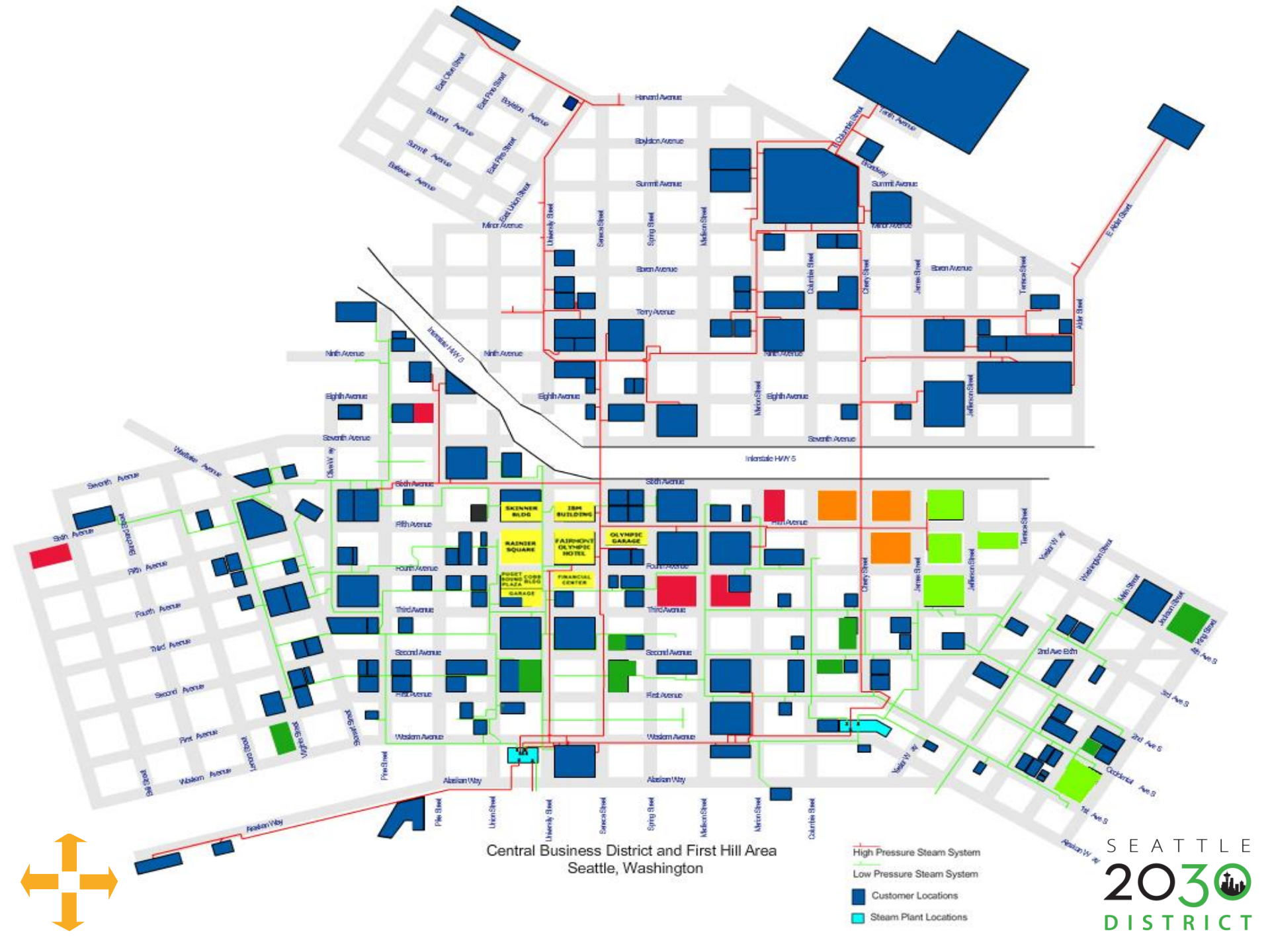
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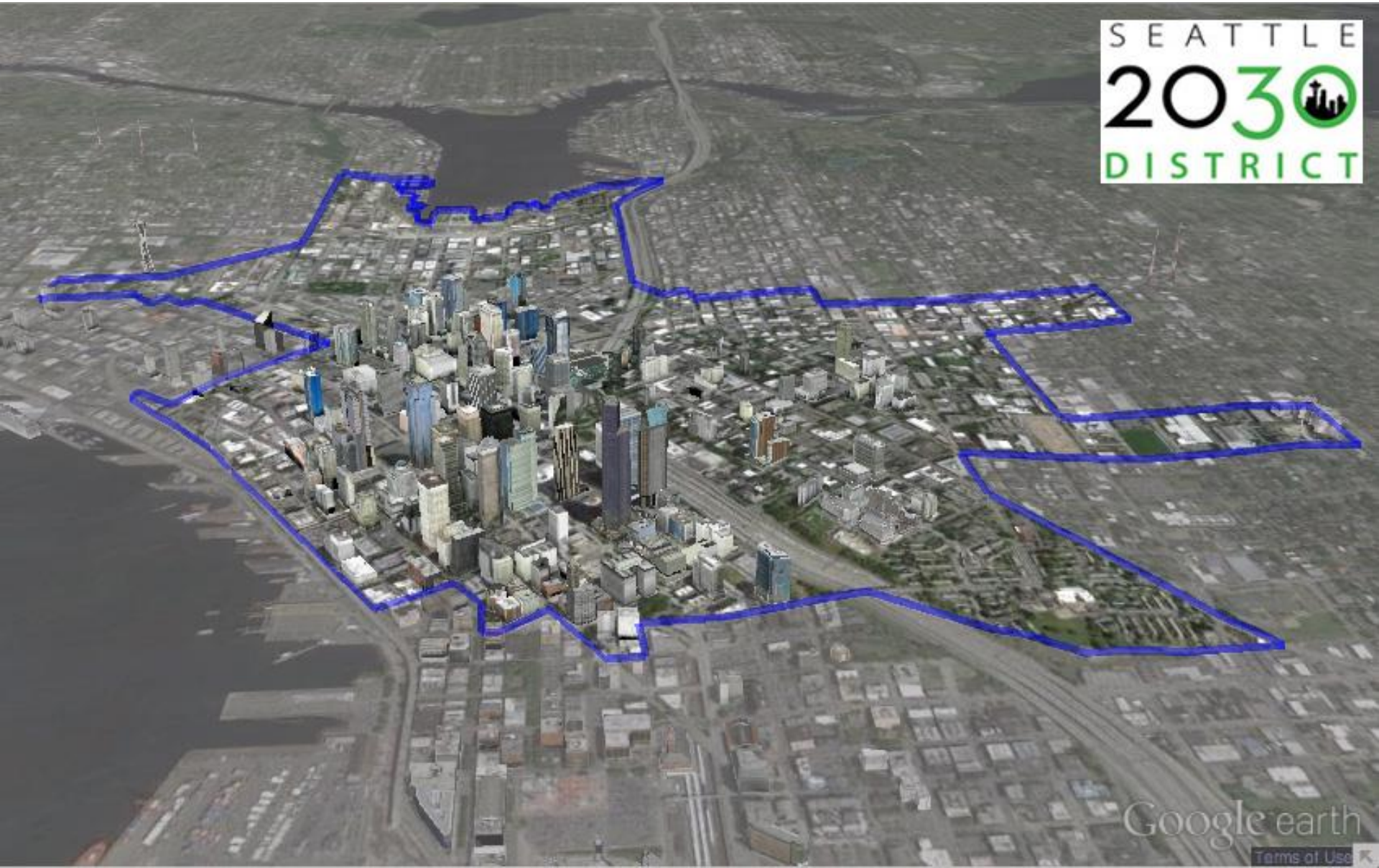
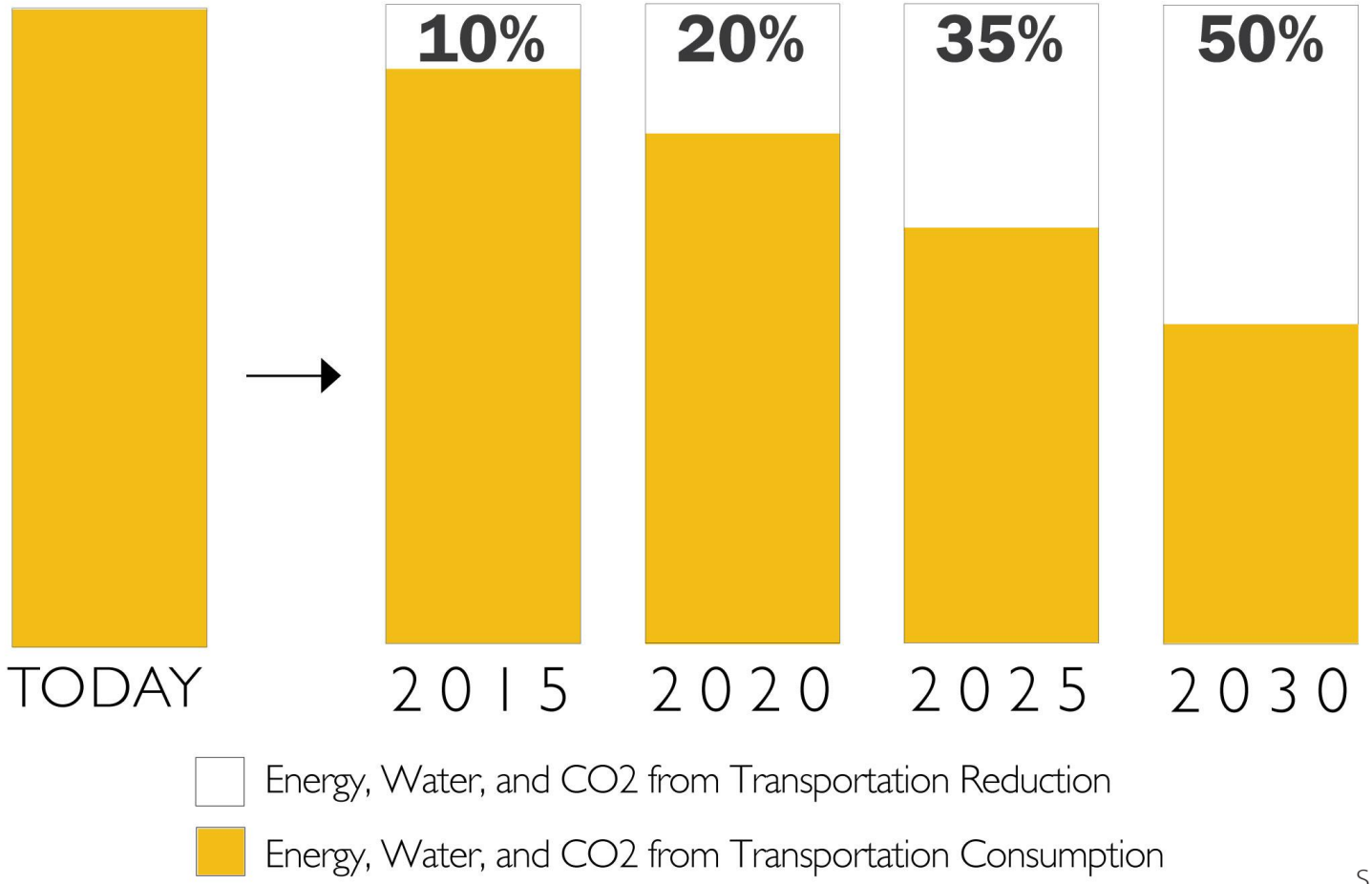
SEATTLE 2030 DISTRICT

SEATTLE STEAM CUSTOMERS
UNICO/UW METRO TRACT
HINES
CBRE
CITY OF SEATTLE
KING COUNTY
BEACON CAPITAL
WRIGHT RUNSTAD
GVA KIDDER MATHEWS
CLISE
Central Business District and First Hill Area
Seattle, Washington
SEATTLE 2030 DISTRICT

Current Boundary



Performance Targets – Existing Buildings



The 2030 Challenge for Planning: Existing Buildings

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Performance Targets

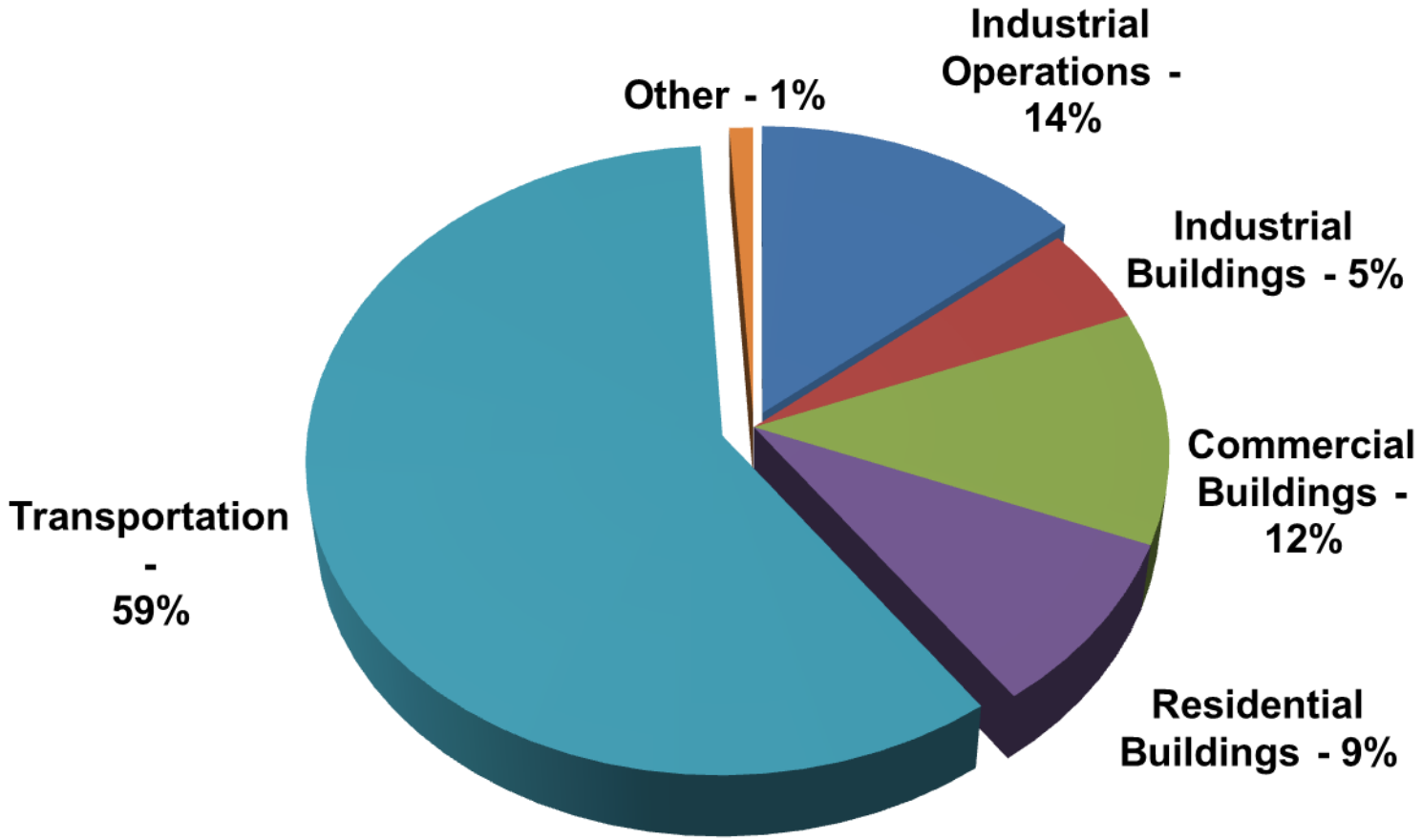
National EUI compared to actual EUI

Regional Baseline

Regional Baseline

SEATTLE 2030 DISTRICT

Seattle's GHG Inventory



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New York's GHG Inventory

2010 Citywide CO_2e Emissions by Sector

Total = 54.3 million metric tons

Buildings = 75%

- Residential
- Commercial
- Industrial
- Institutional

Transportation = 21%

- On-road transportation
- Transit

Wastewater, fugitive = 2%

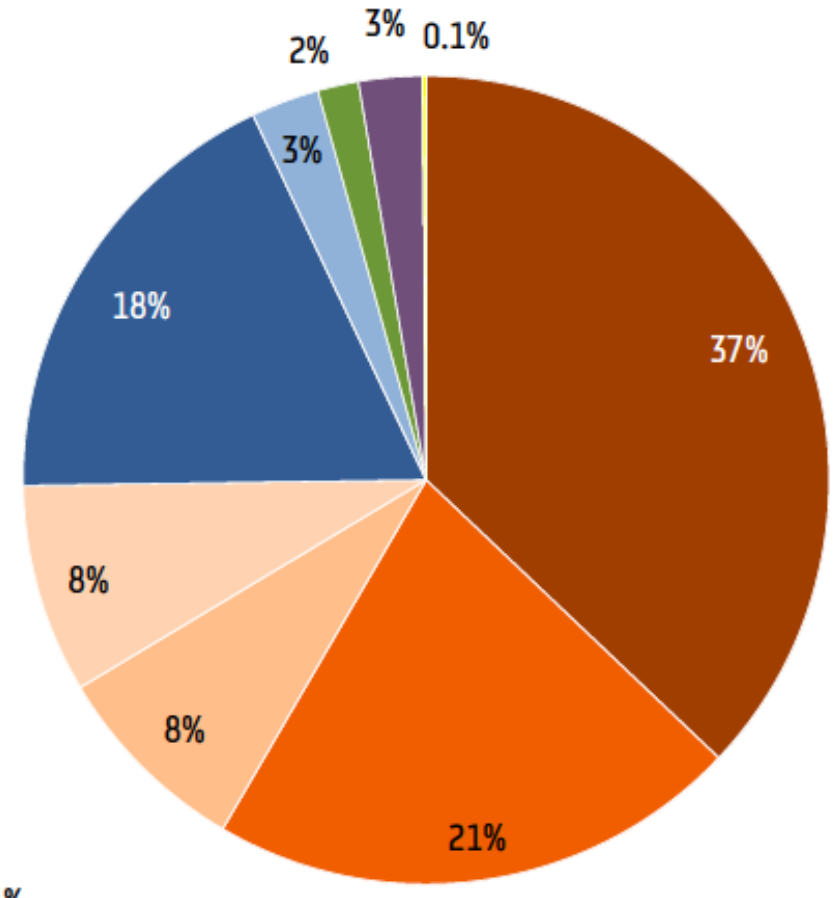
- Wastewater, fugitive

Solid waste = 3%

- Solid waste

Streetlights and traffic signals = 0.1%

- Streetlights and traffic signals



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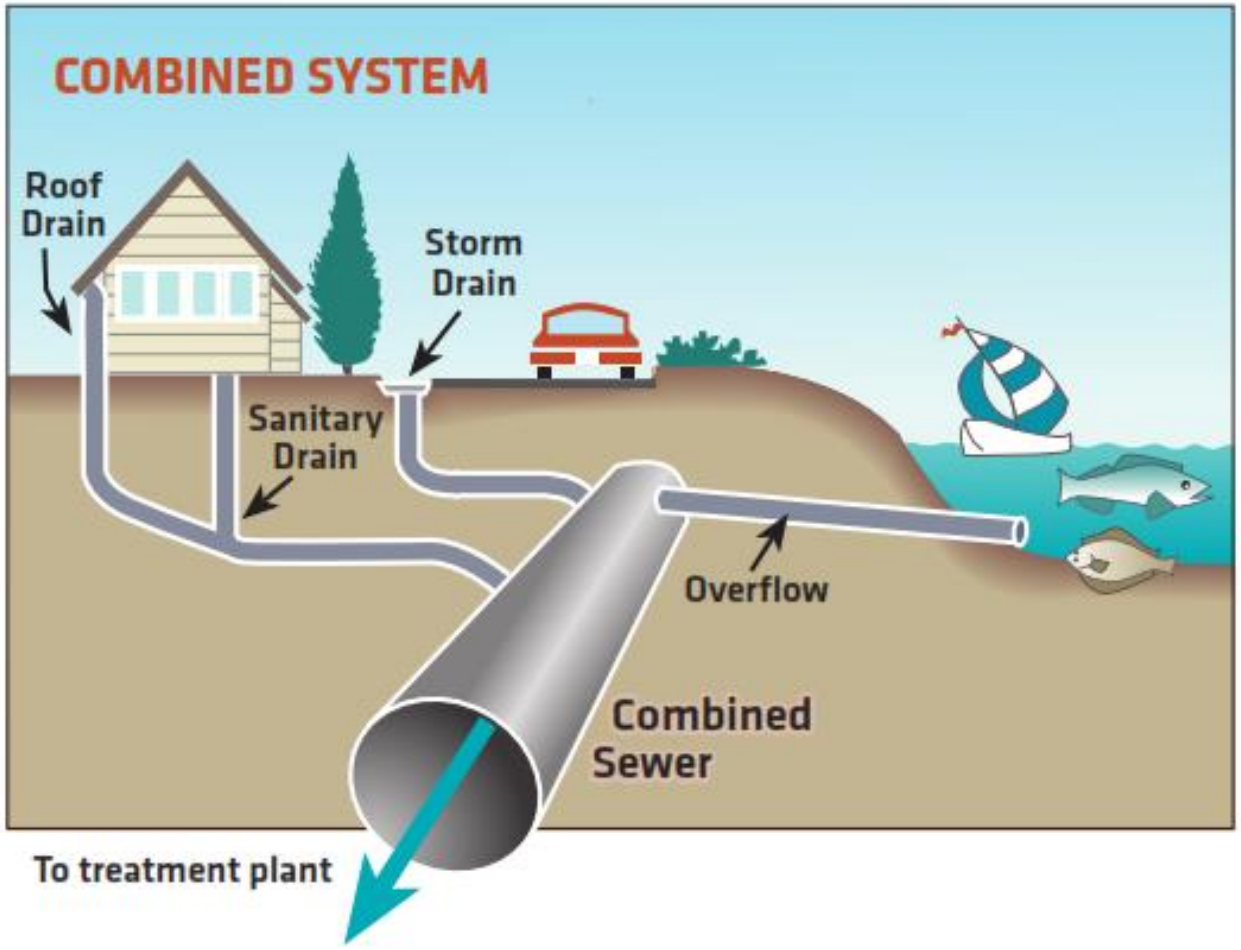
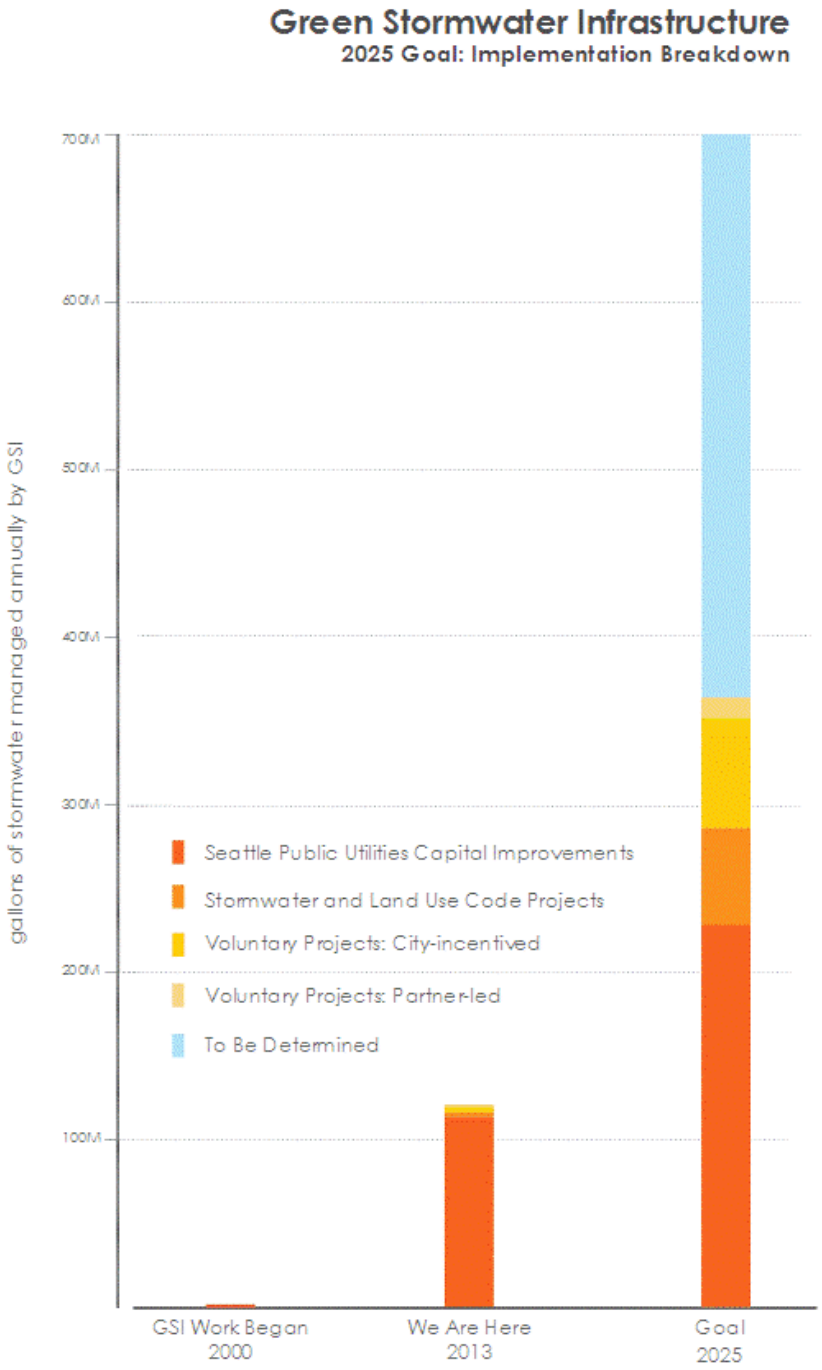
Water: A Deeper Dive



- Seattle, 2012:
  - 355 Events
  - 154 MG of sewage into our waterways

SEATTLE 2030 DISTRICT



Aggressive GSI Goals

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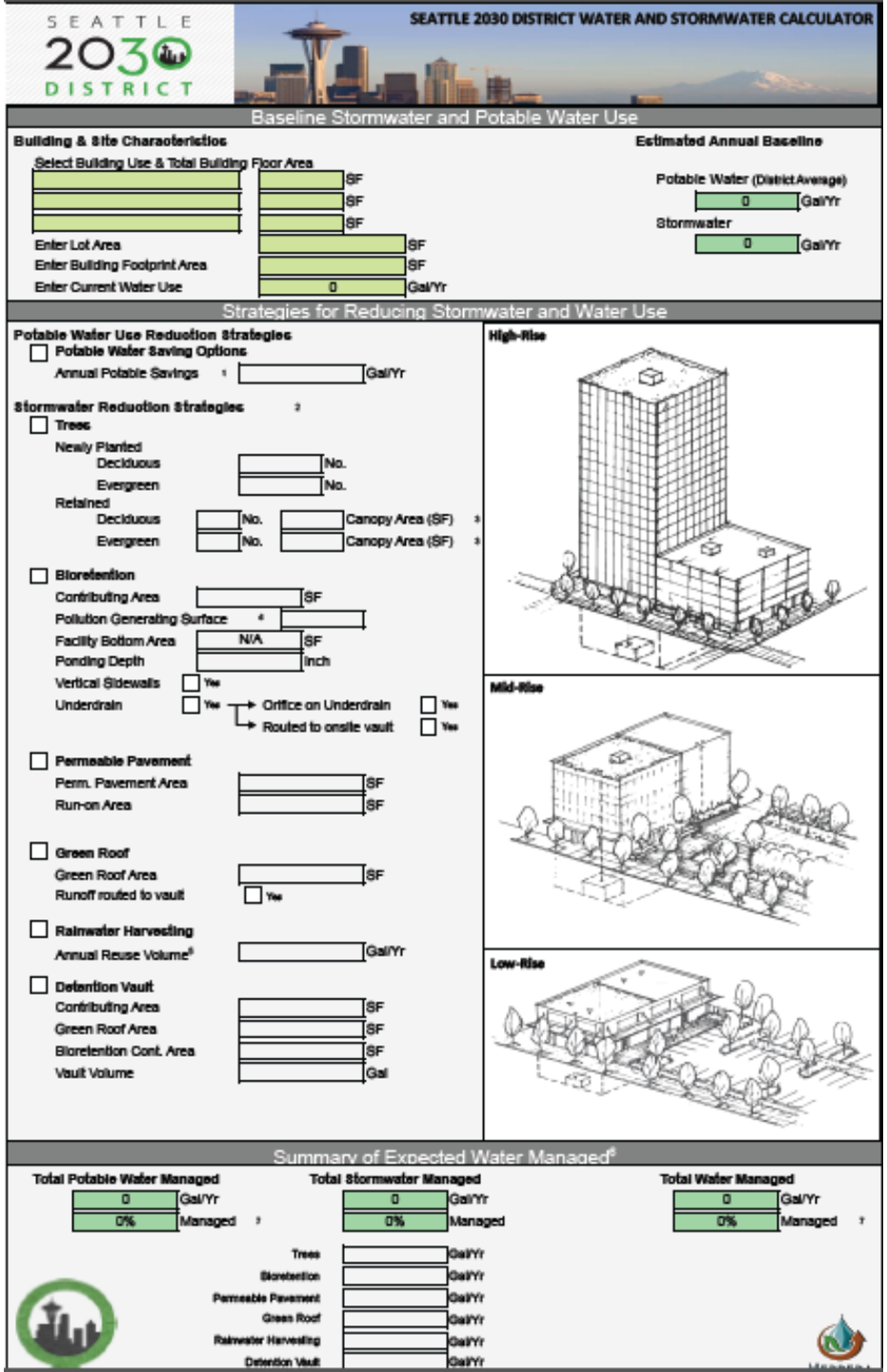
SEATTLE 2030 DISTRICT

SEATTLE 2030 DISTRICT WATER AND STORMWATER CALCULATOR

Baseline Stormwater and Potable Water Use

Building & Site Characteristics

Select Building Use & Total Building Floor Area

SF

SF

SF

Enter Lot Area SF

Enter Building Footprint Area SF

Enter Current Water Use 0 Gal/Yr

Estimated Annual Baseline

Potable Water (District Average) 0 Gal/Yr

Stormwater 0 Gal/Yr

Strategies for Reducing Stormwater and Water Use

Potable Water Use Reduction Strategies

Potable Water Saving Options

Annual Potable Savings [1] Gal/Yr

Stormwater Reduction Strategies [2]

Trees

Newly Planted

Deciduous No.

Evergreen No.

Retained

Deciduous No. Canopy Area (SF) [3]

Evergreen No. Canopy Area (SF) [3]

Bioretention

Contributing Area SF

Pollution Generating Surface [4]

Facility Bottom Area N/A SF

Ponding Depth inch

Vertical Sidewalls Yes

Underdrain Yes → Orifice on Underdrain Yes

→ Routed to onsite vault Yes

Permeable Pavement

Perm. Pavement Area SF

Run-on Area SF

Green Roof

Green Roof Area SF

Runoff routed to vault Yes

Rainwater Harvesting

Annual Reuse Volume[5] Gal/Yr

Detention Vault

Contributing Area SF

Green Roof Area SF

Bioretention Cont. Area SF

Vault Volume Gal

High-Rise

Mid-Rise

Low-Rise

Summary of Expected Water Managed[6]

Total Potable Water Managed

0 Gal/Yr

0% Managed [7]

Total Stormwater Managed

0 Gal/Yr

0% Managed

Total Water Managed

0 Gal/Yr

0% Managed [7]

Trees Gal/Yr

Bioretention Gal/Yr

Permeable Pavement Gal/Yr

Green Roof Gal/Yr

Rainwater Harvesting Gal/Yr

Detention Vault Gal/Yr

The 2030 Water and Storm Water Calculator

SEATTLE 2030 DISTRICT

Progress

144 Buildings

SEATTLE 2030 DISTRICT

Progress

35% of the Total Square Footage

SEATTLE 2030 DISTRICT

Aggregated Performance
Shared Buildings

23% Reduction
in Energy

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Aggregated Performance
Shared Buildings

7.5%
Reduction in
Water

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Aggregated Performance
Shared Buildings

5.4%
Reduction in Transportation Emissions

SEATTLE 2030 DISTRICT

Aggregated Performance
Total District

9% Reduction
in Energy

SEATTLE 2030 DISTRICT

Aggregated Performance
Total District

2.5%
Reduction in
Water

SEATTLE 2030 DISTRICT

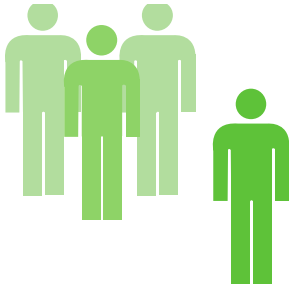
Aggregated Performance
Total District

8.6%
Reduction in Transportation Emissions

SEATTLE 2030 DISTRICT

Benefits For Building Owners, Managers and Developers

Utilize special
Financing programs



Improve competitive
positioning

Access exclusive
incentives, discounts
& programs

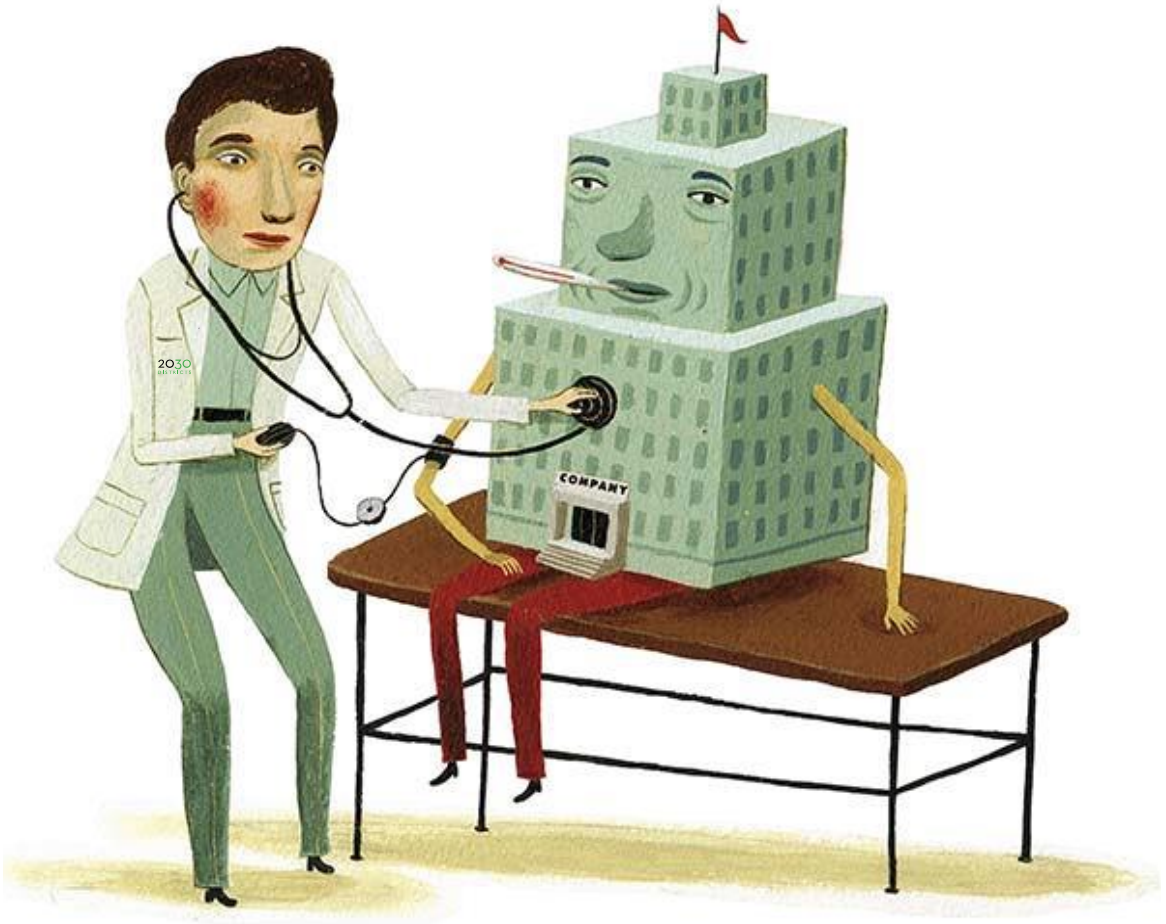
Receive comparative
analysis reports

SEATTLE 2030 DISTRICT

architecture 2030

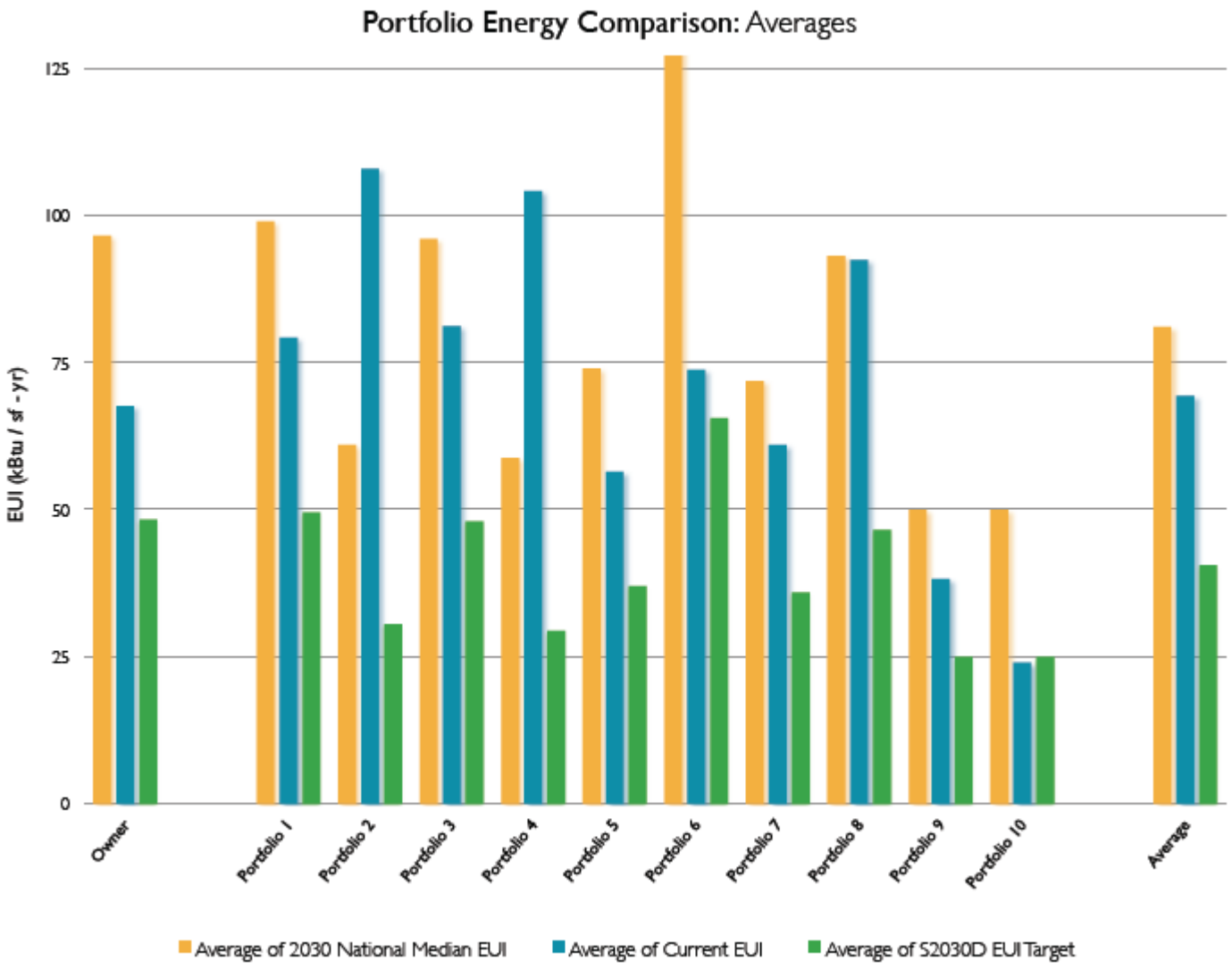
SEATTLE 2030 DISTRICT

Building Assessment



SEATTLE 2030 DISTRICT

Portfolio Comparisons



SEATTLE 2030 DISTRICT

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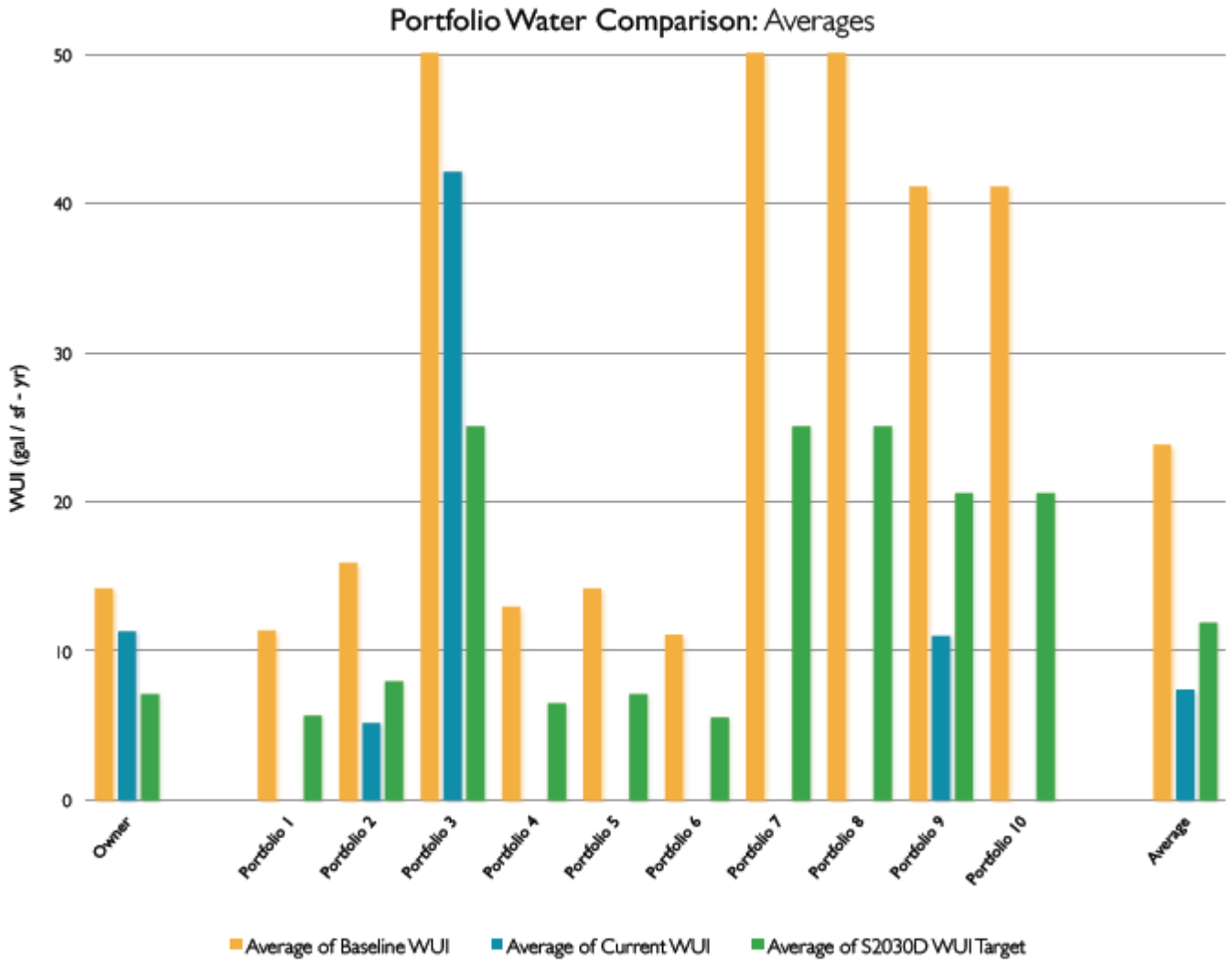


SEATTLE 2030 DISTRICT

Portfolio Progress Report

Portfolio Progress Report

ENERGY

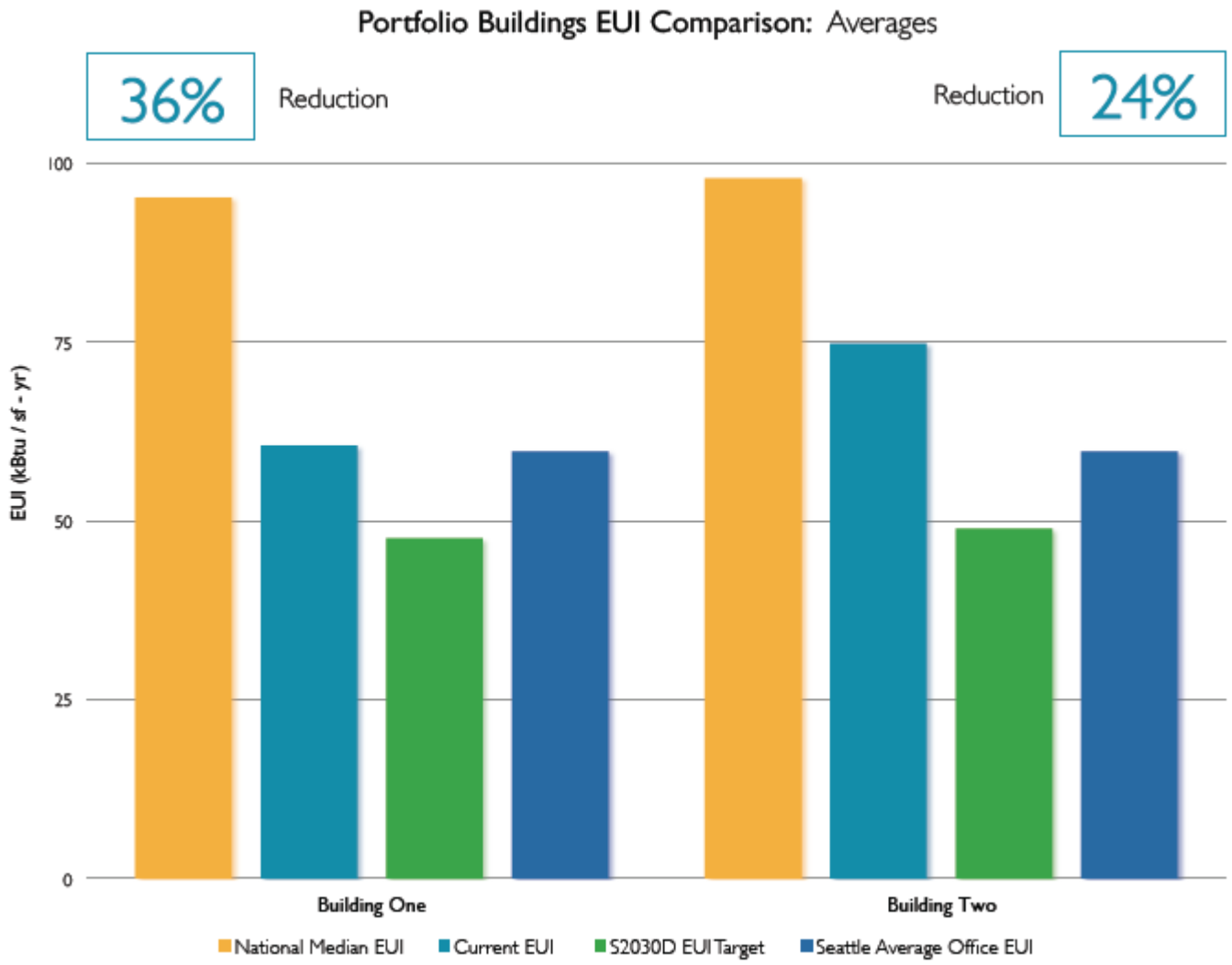
% EUI Reduction (from Baseline)	30%
% EUI Reduction / Year Necessary to Reach 2015 Target (10%)	0%

WATER

% WUI Reduction (from Baseline)	20%
% EUI Reduction / Year Necessary to Reach 2015 Target (10%)	0%

SEATTLE 2030 DISTRICT

Property Comparisons



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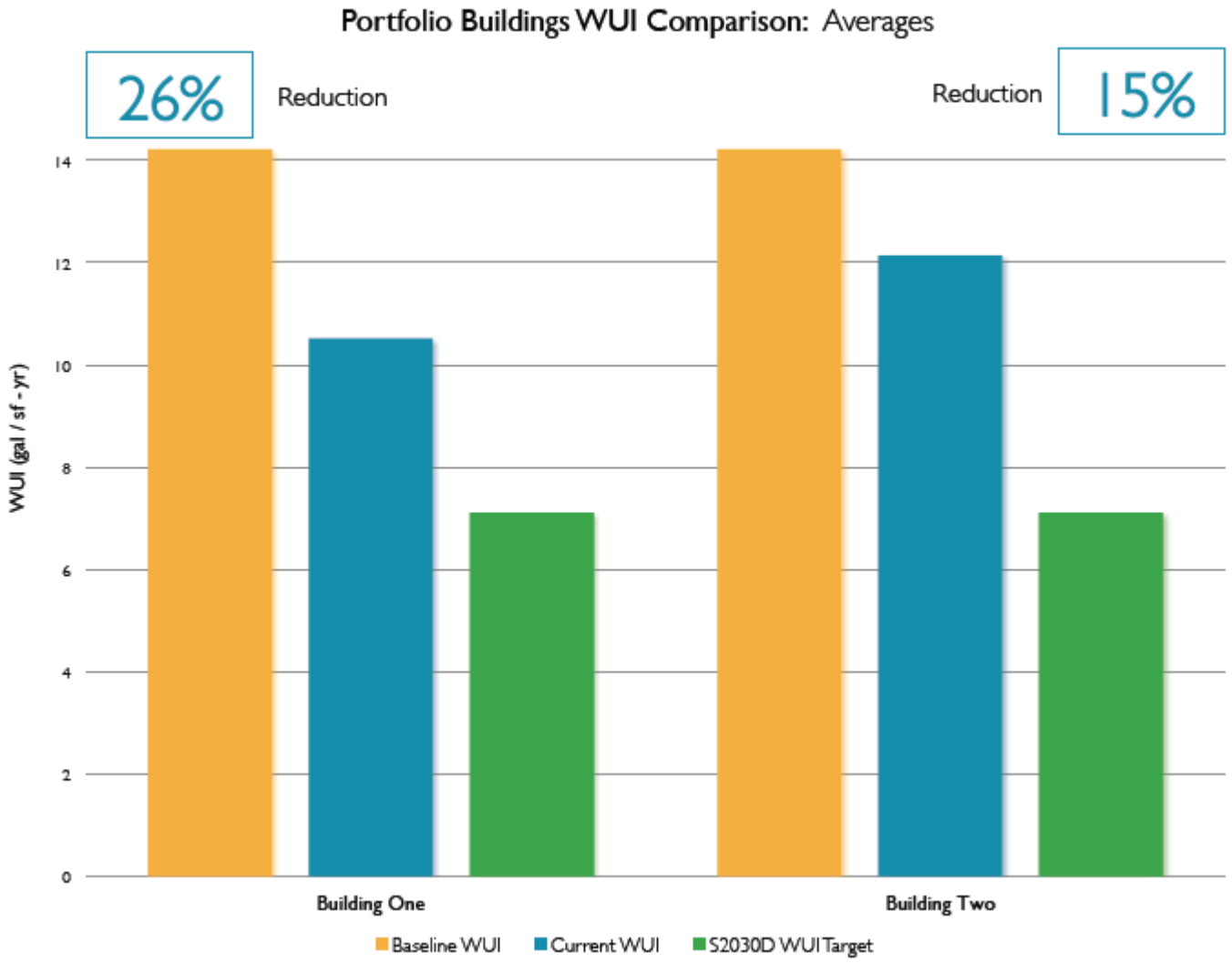

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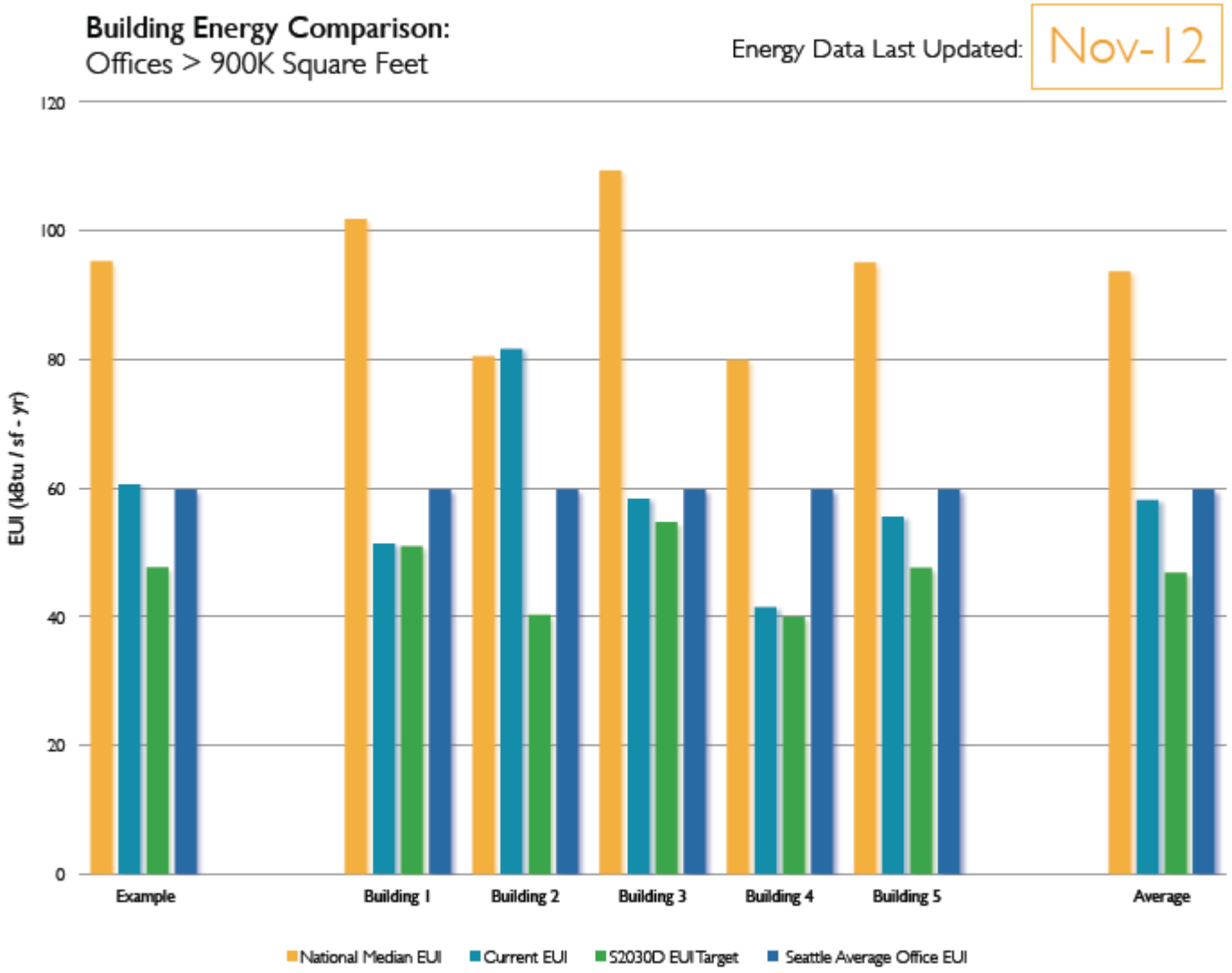

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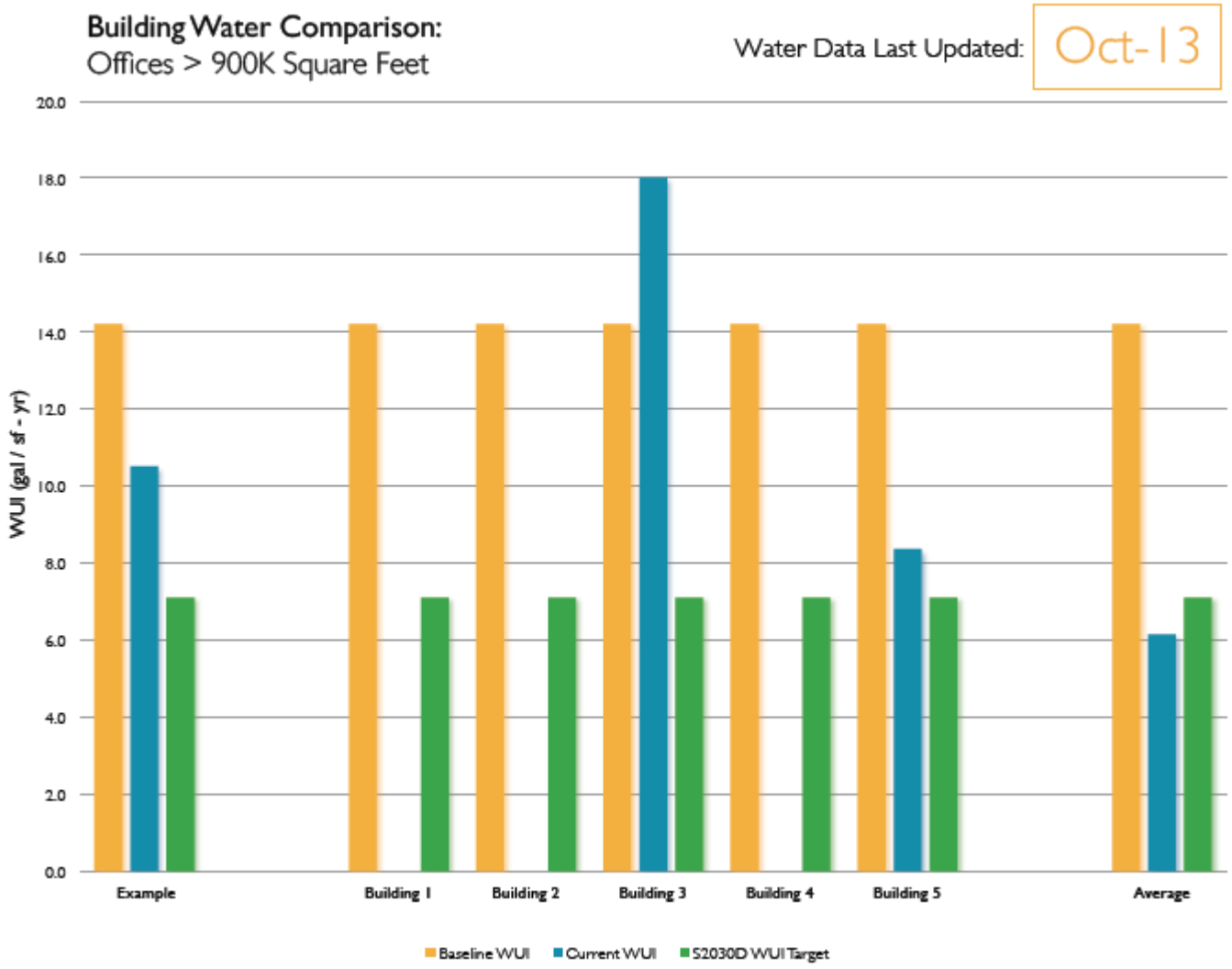

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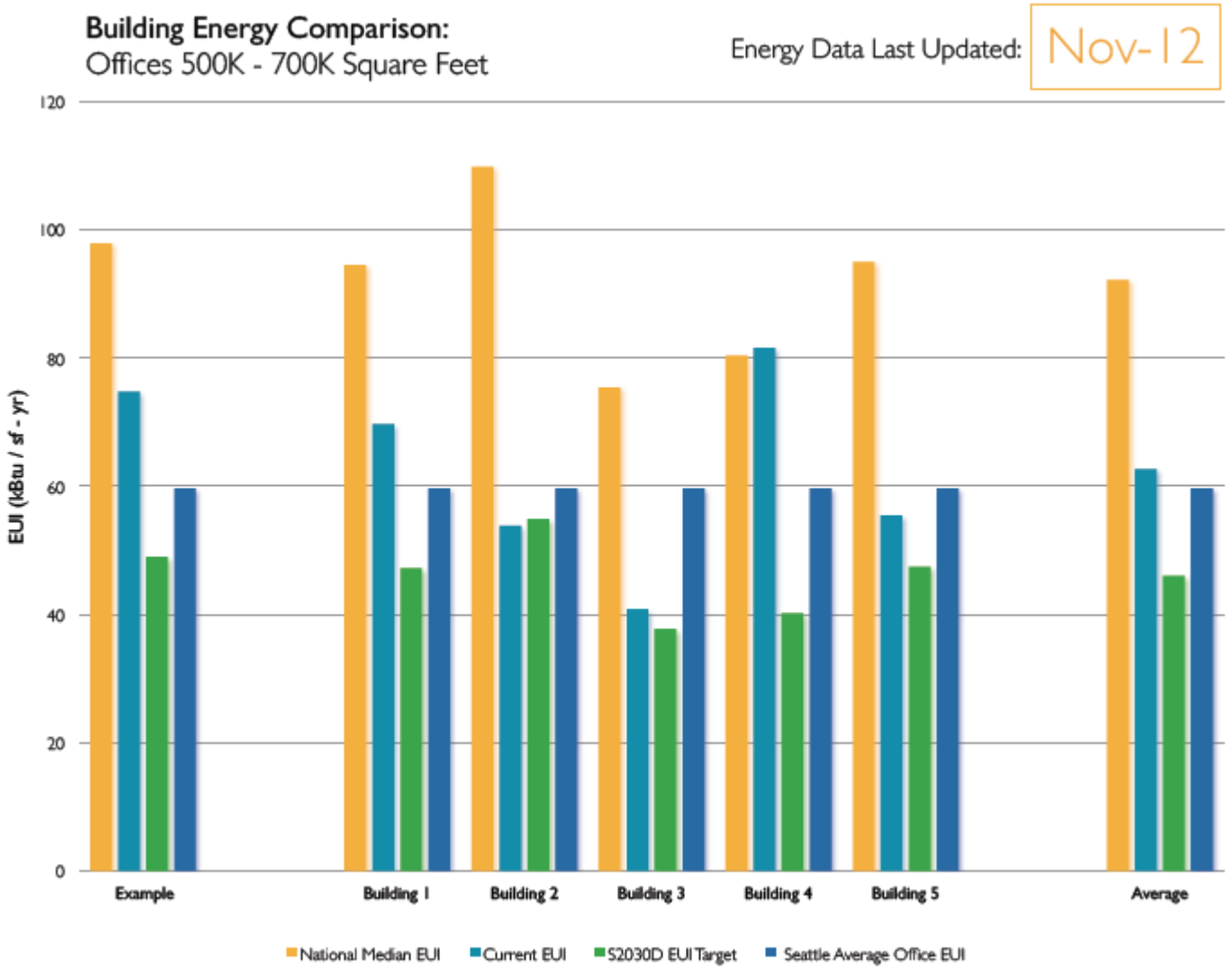

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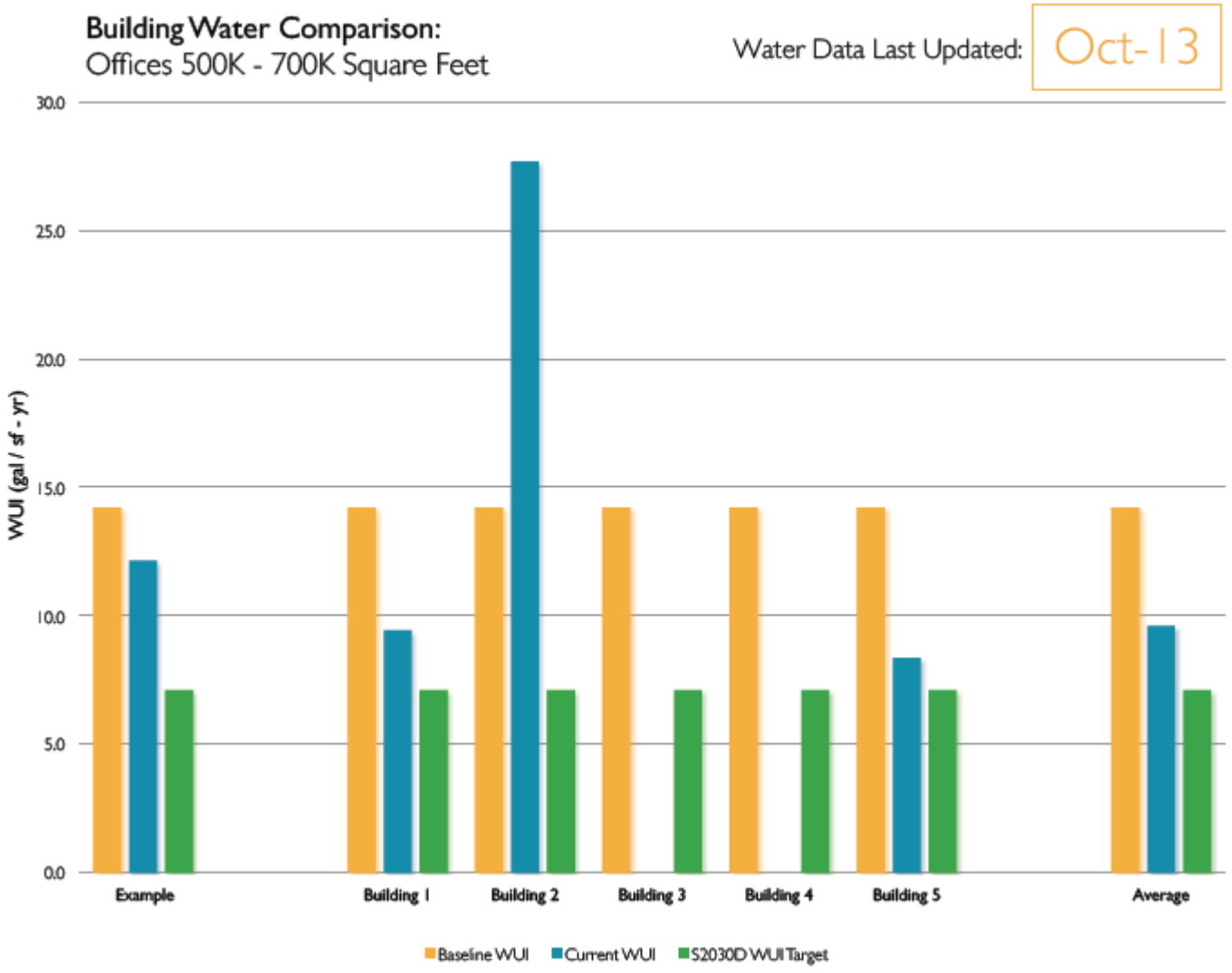
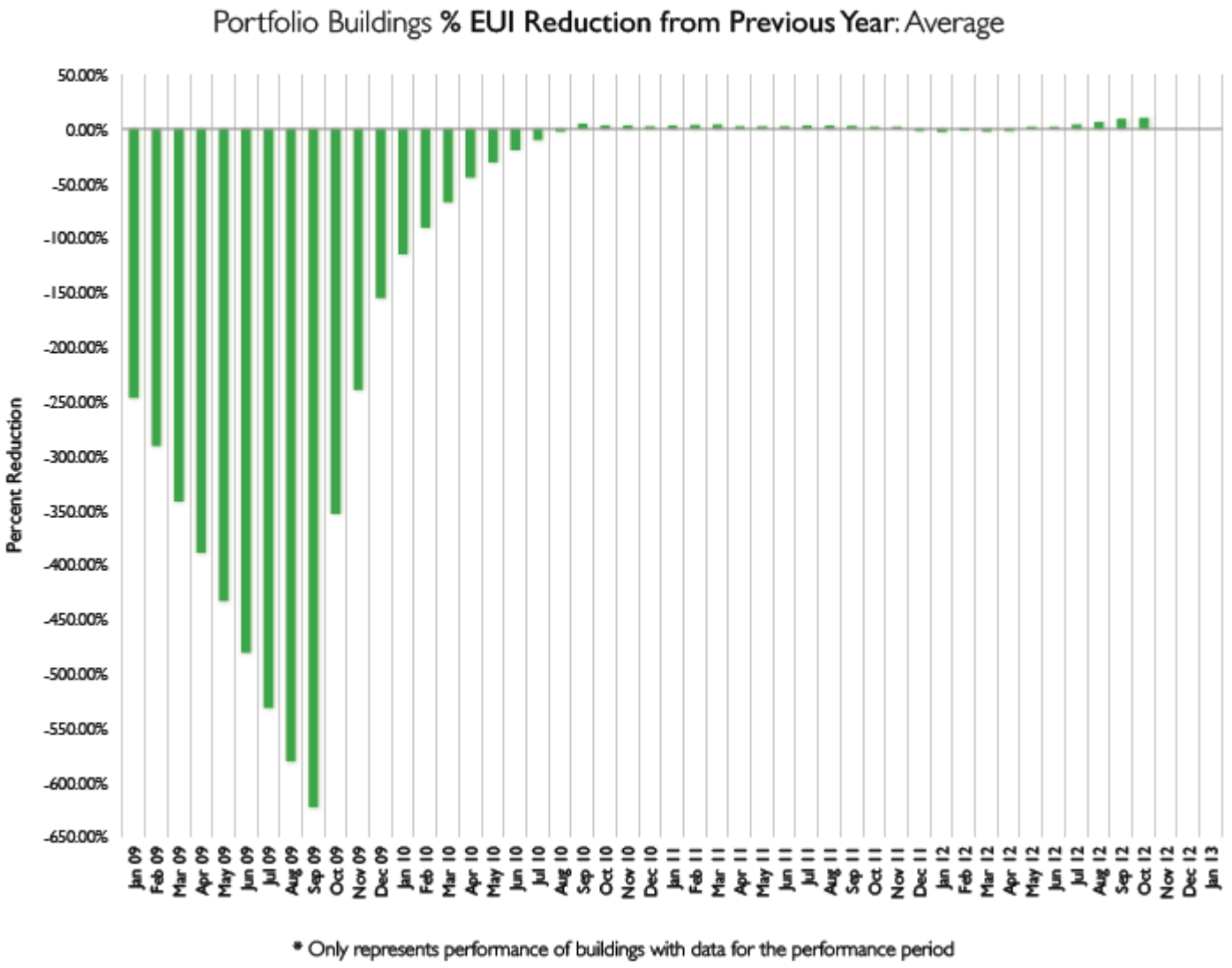


SEATTLE 2030 DISTRICT

Portfolio Analysis

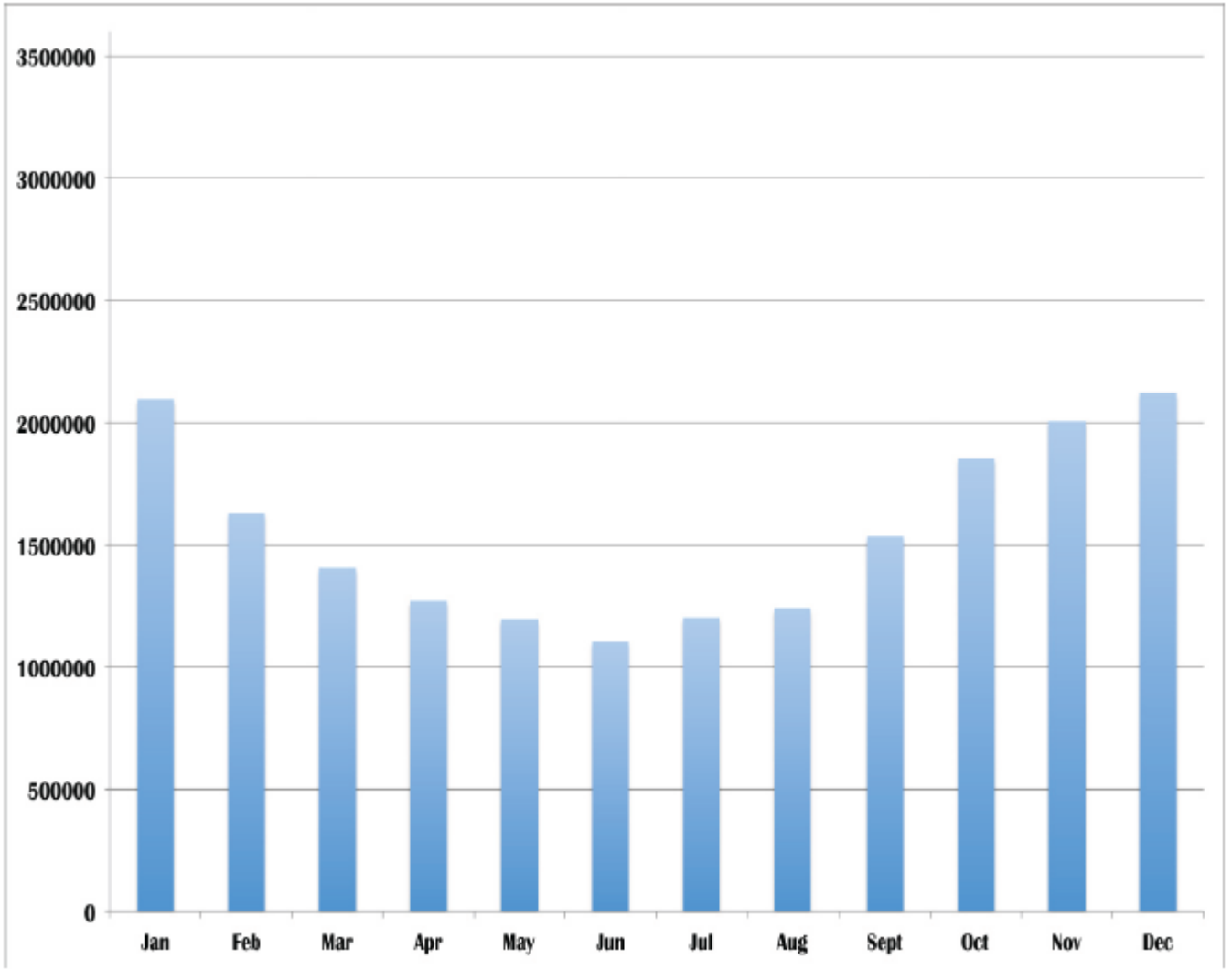


* Only represents performance of buildings with data for the performance period

SEATTLE 2030 DISTRICT

Energy Load Profile Assessment

Seattle 2030 District Office Load Profile



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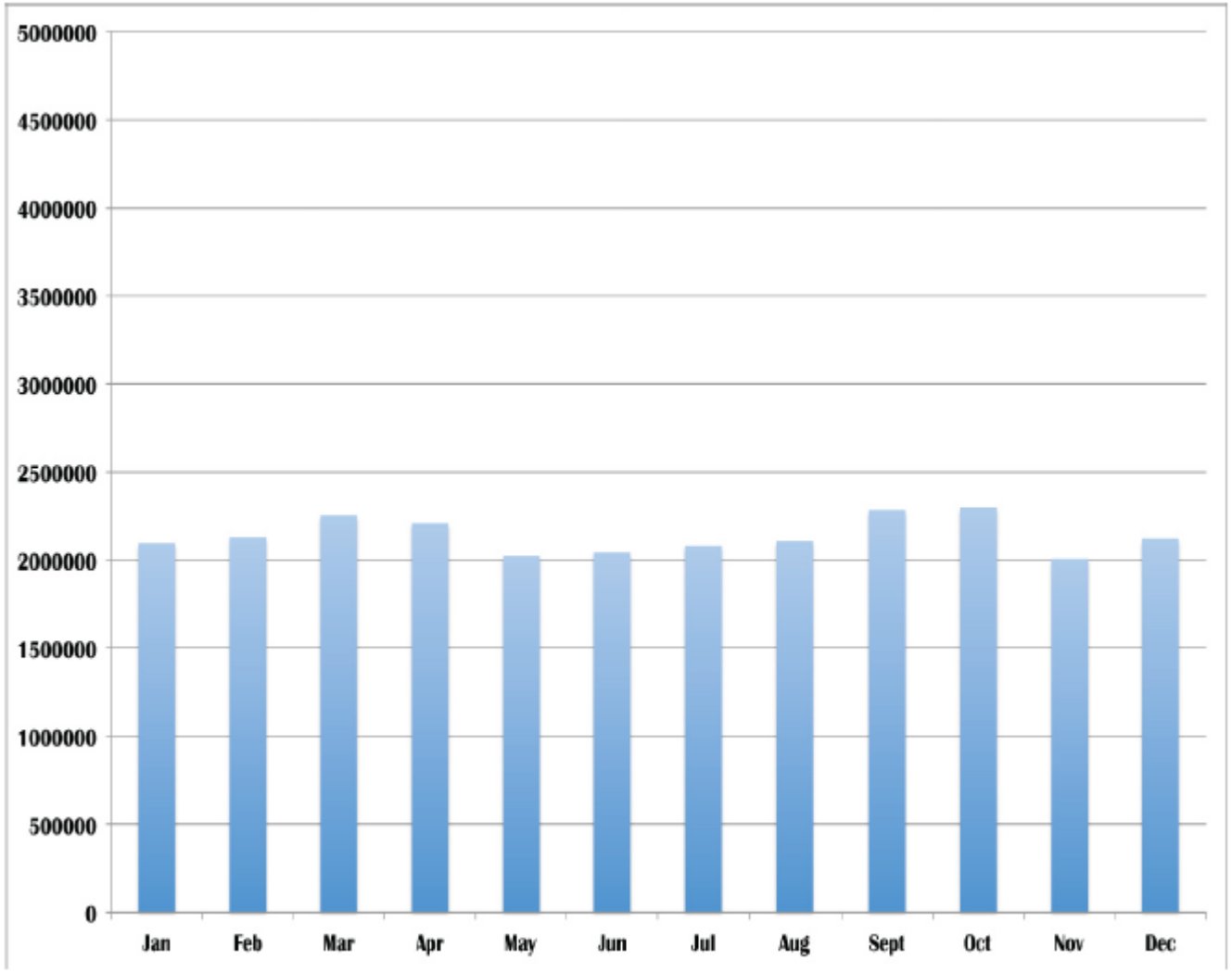

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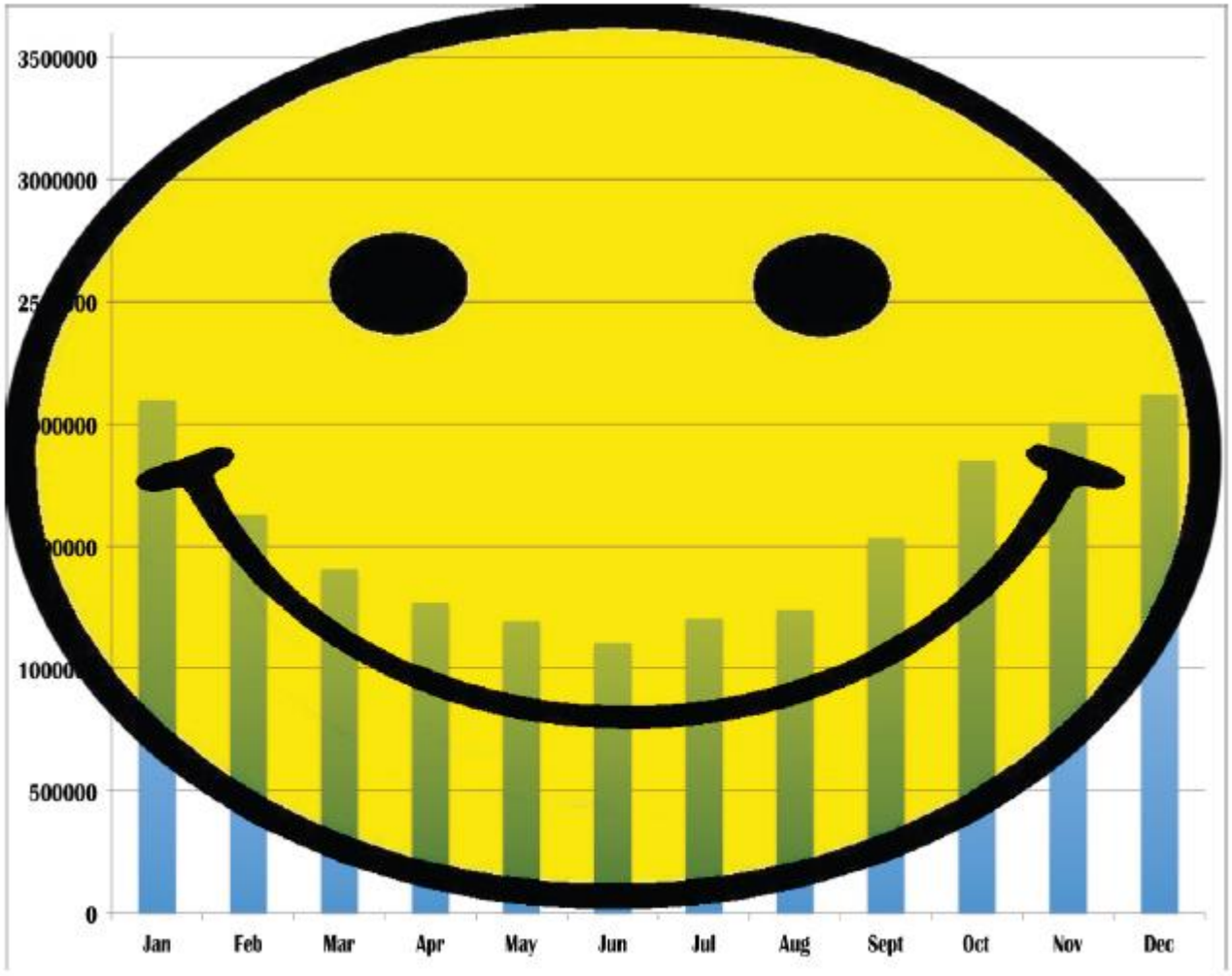

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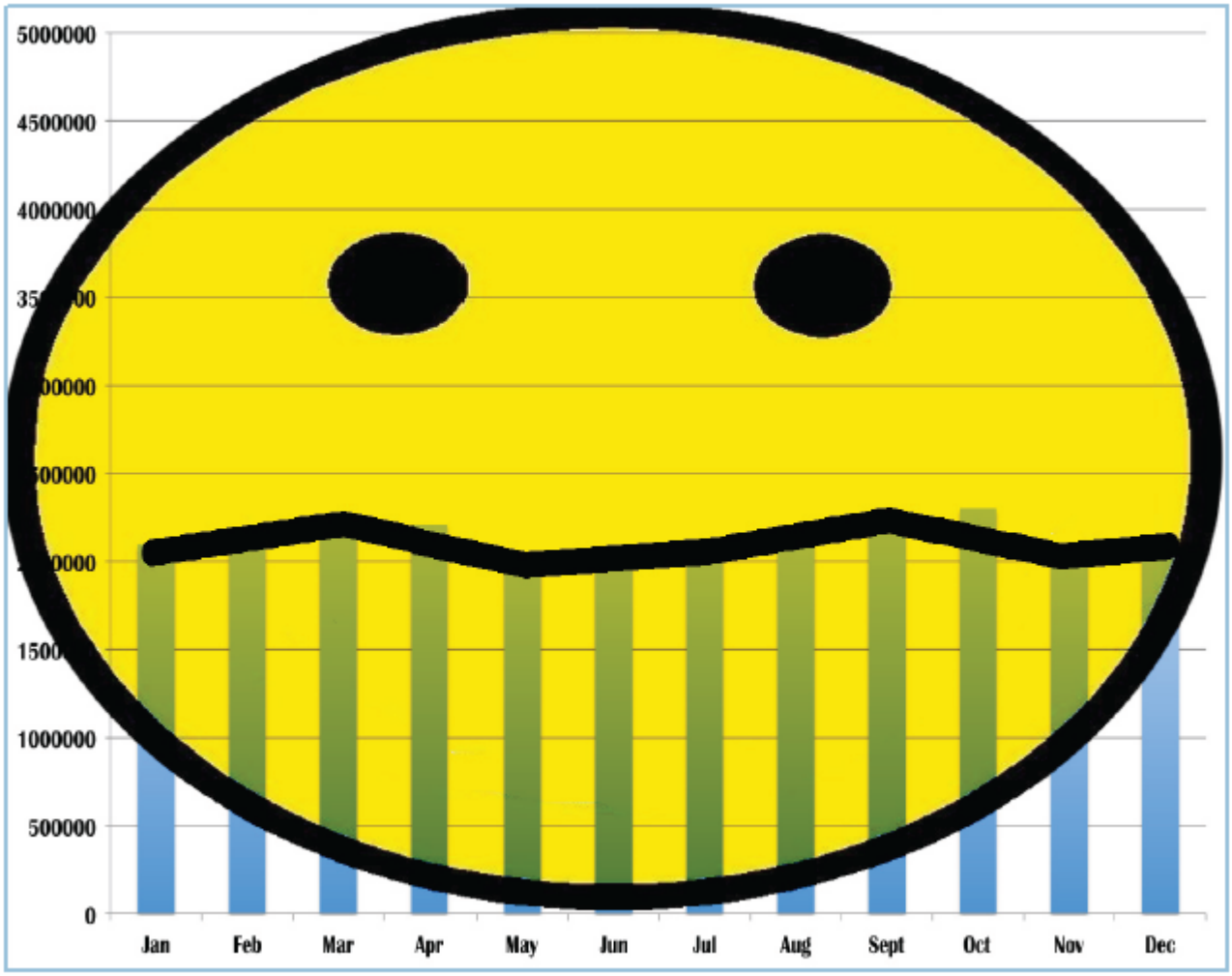
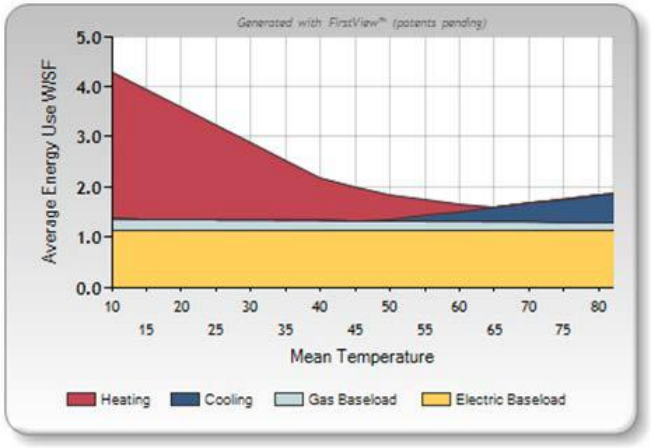


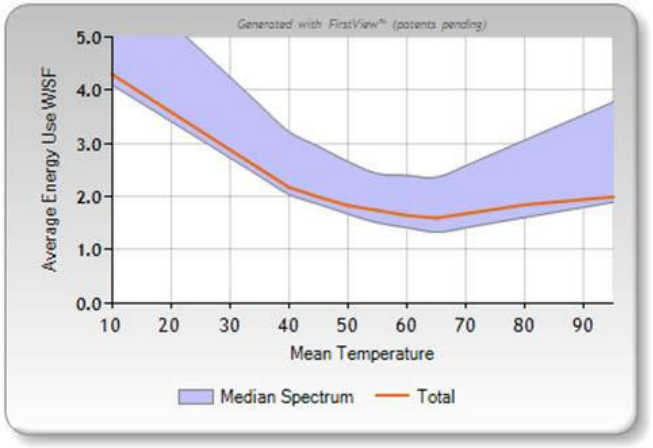
SEATTLE 2030 DISTRICT

Access Exclusive Incentives, Discounts & Programs

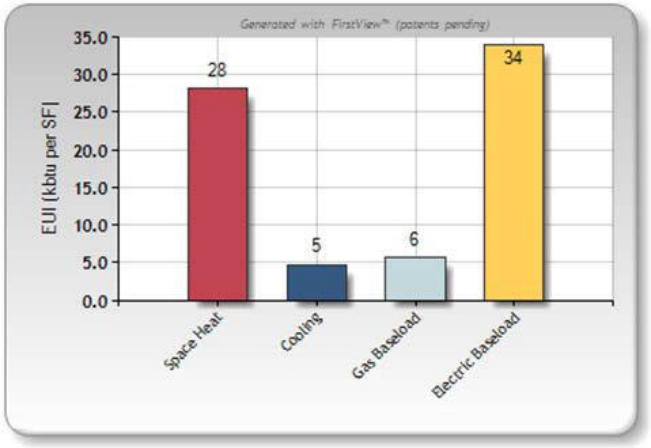
FirstView™ Reports



Energy Consumption By End Use



PEER Building Comparison

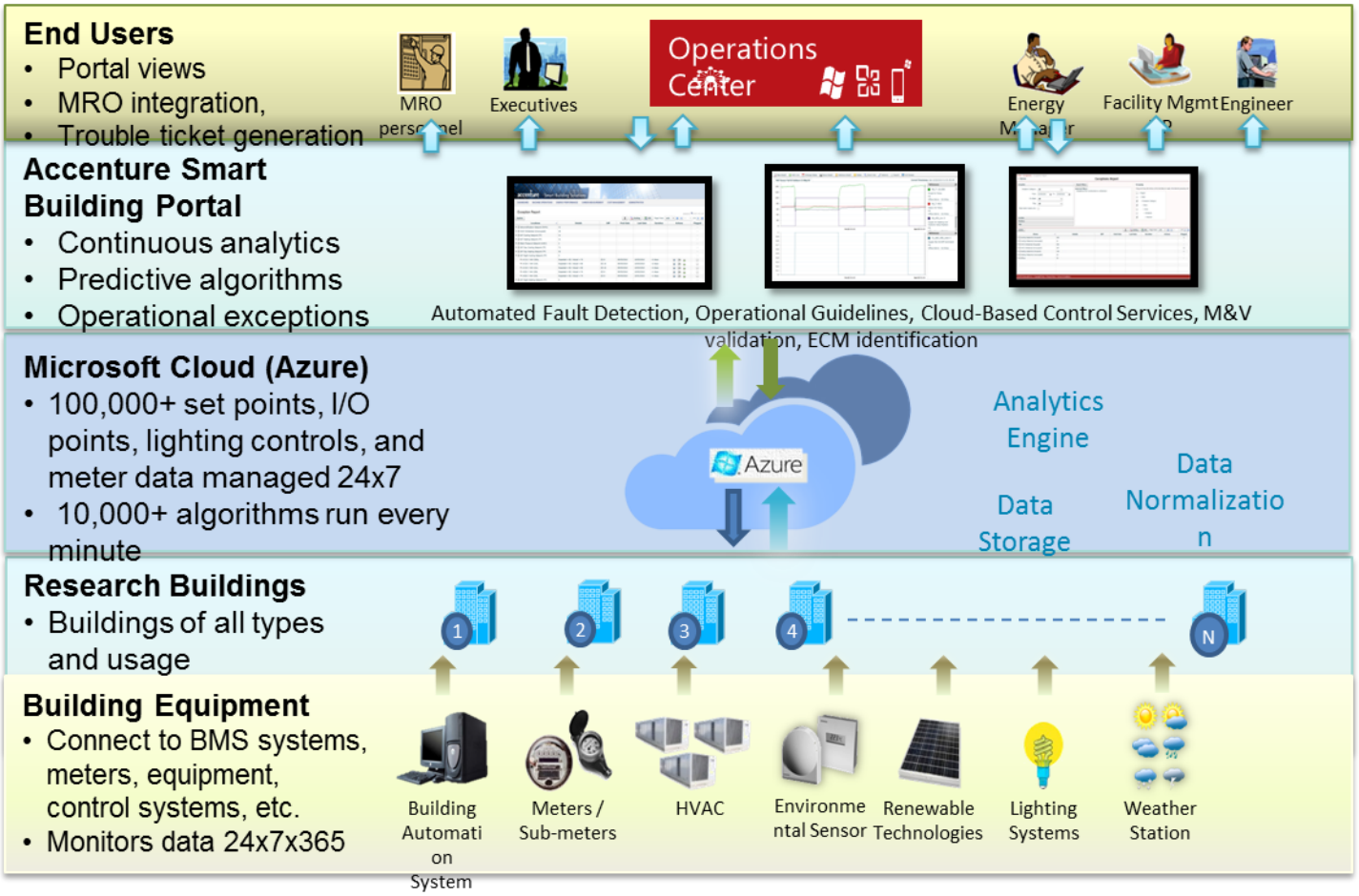


EUI by End Use

FirstView Diagnostics

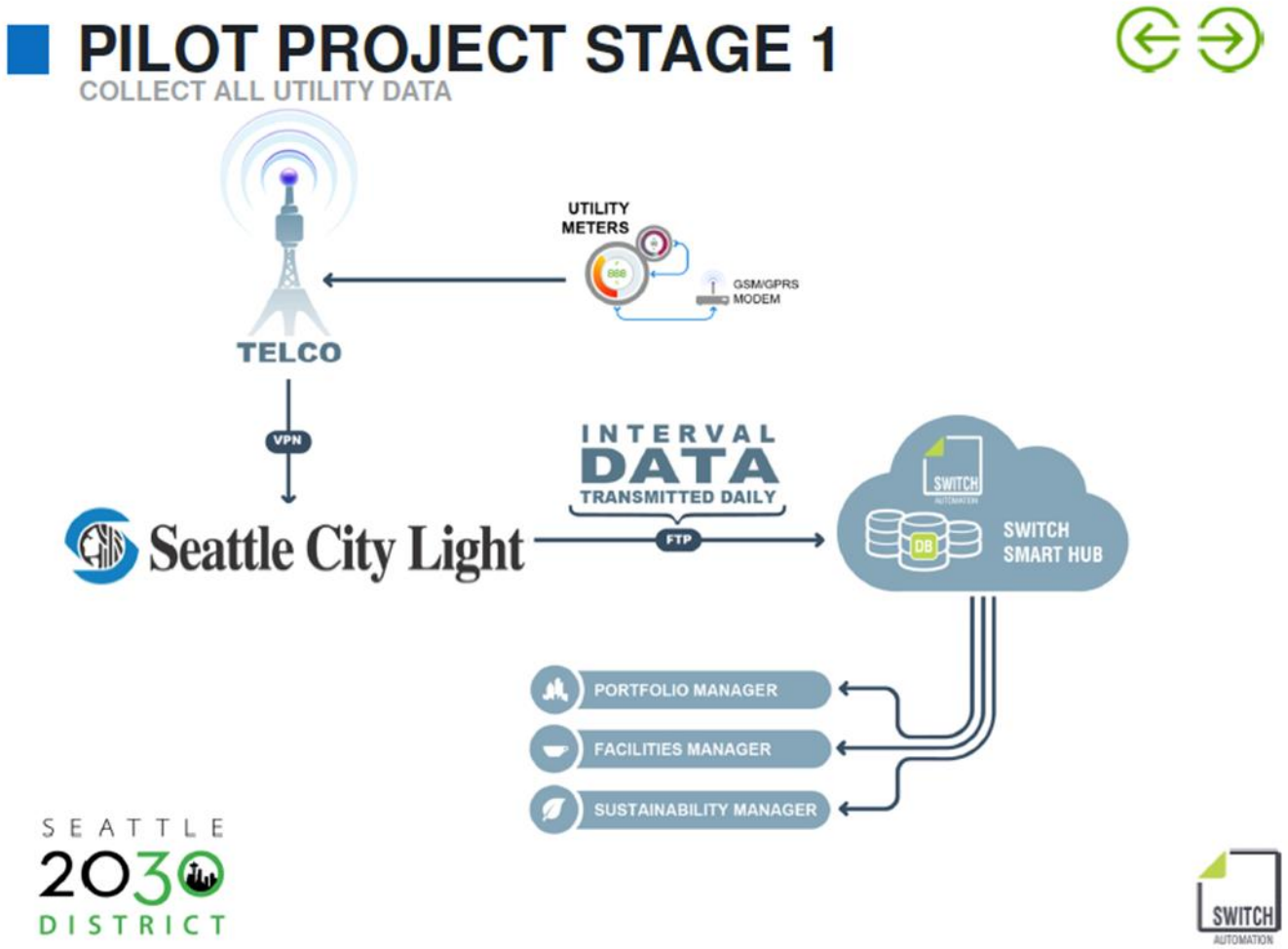
FirstView Category	*Status*
Occupant Load:	*Typical*
Heating and Ventilation	*Good*
Cooling Efficiency:	*Good*
Controls:	*Moderate Inefficiencies*
Reheat:	*Unlikely*
Gas Baseload:	*High*
Data Consistency:	*Orderly*

Smart Building and Energy Solutions



discount

Switch Automation



free

SEATTLE 2030 DISTRICT

SWITCH AUTOMATION

Microsoft

Seattle City Light

growseattle
office of economic development

free

Switch Automation

SWITCH AUTOMATION

The Switch Solution

An Enterprise Operations Platform

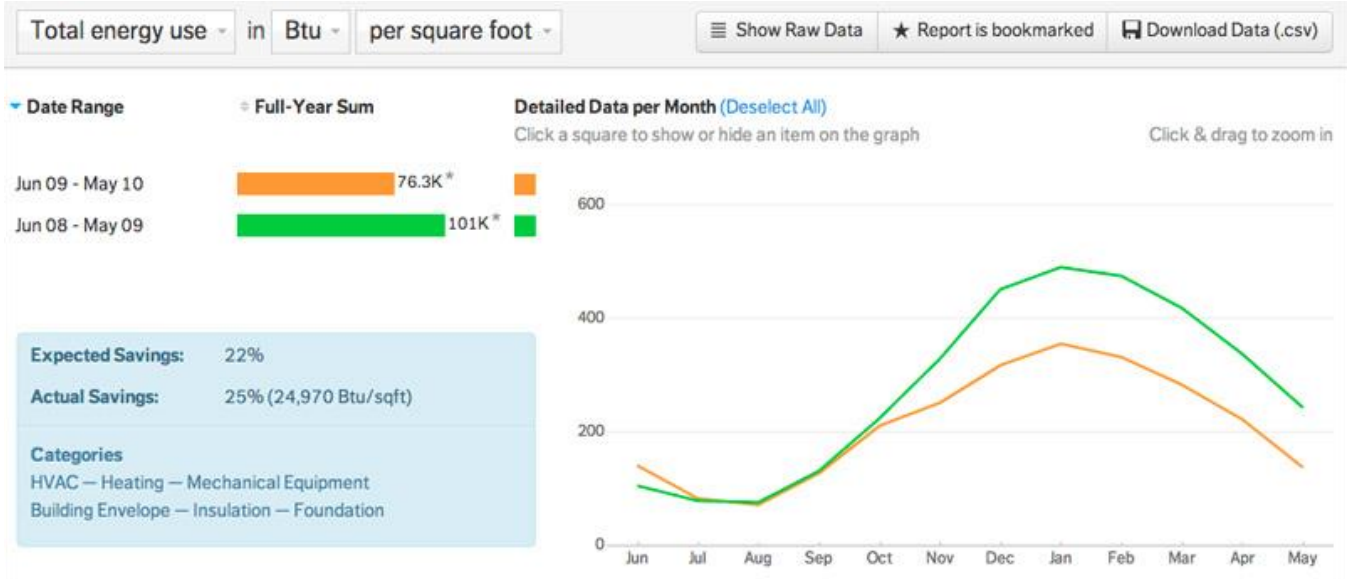
switchautomation.com
@SwitchHQ

- Single data repository, single web console
- Visibility into portfolio wide data and costs
- Spectacular time saving and data aggregation
- Decouples supplier & service providers
- Simple integration with Energy Star Portfolio Manager

SEATTLE 2030 DISTRICT

wegowise

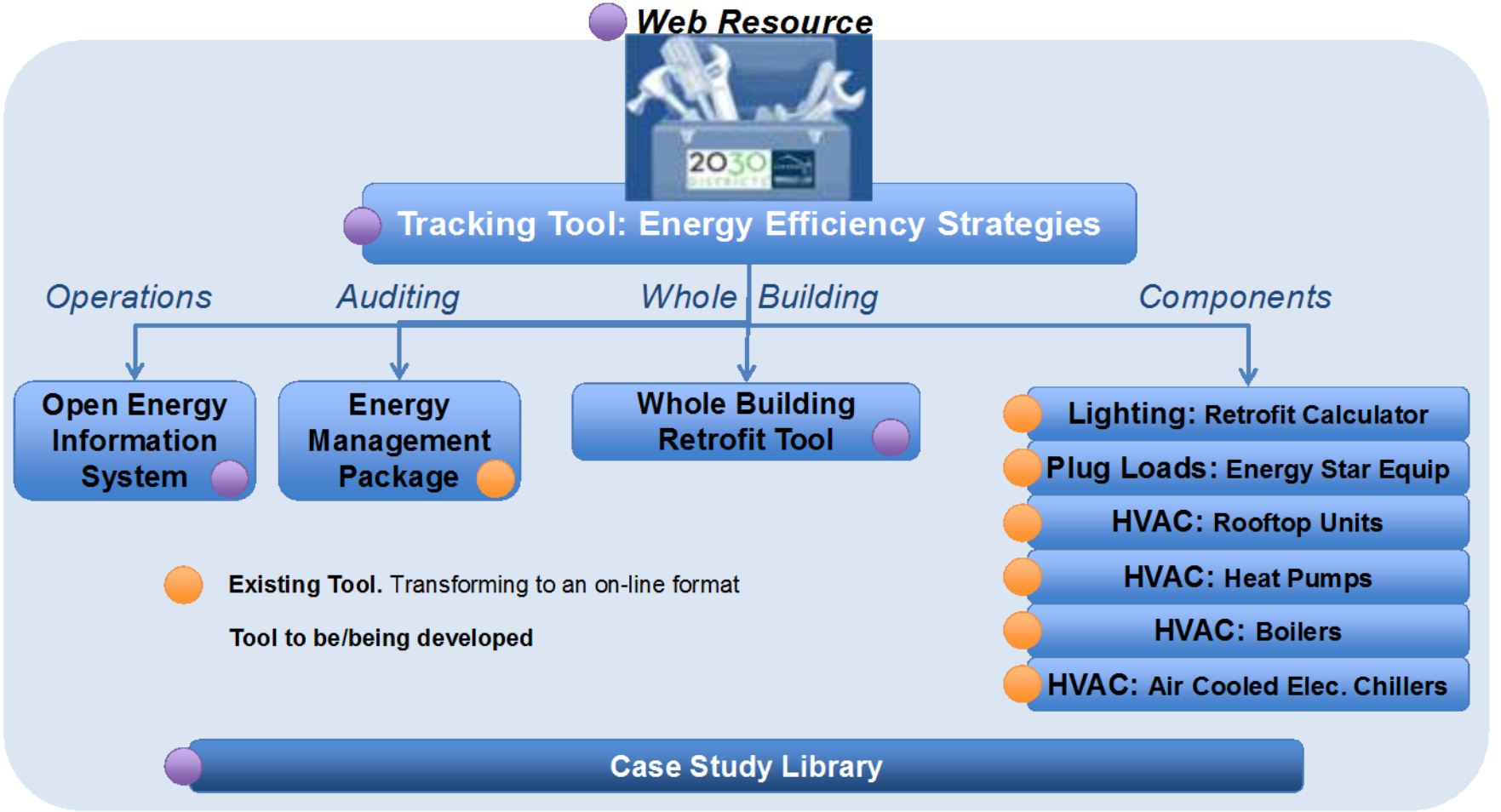
Wegowise Pro



free

*For the first 10% of each District's floor space

Small Commercial Toolkit



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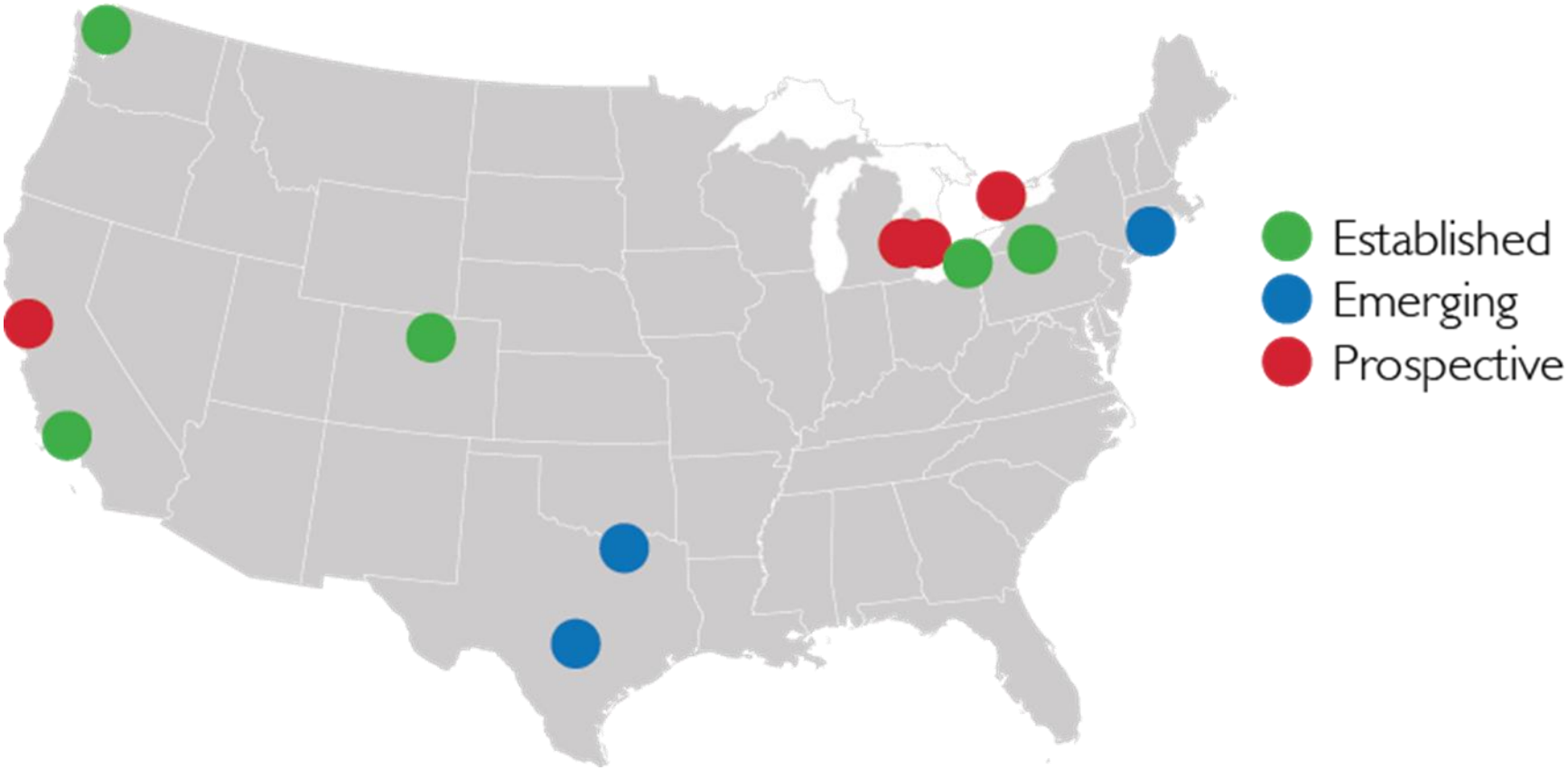
SEATTLE 2030 DISTRICT

NISSAN

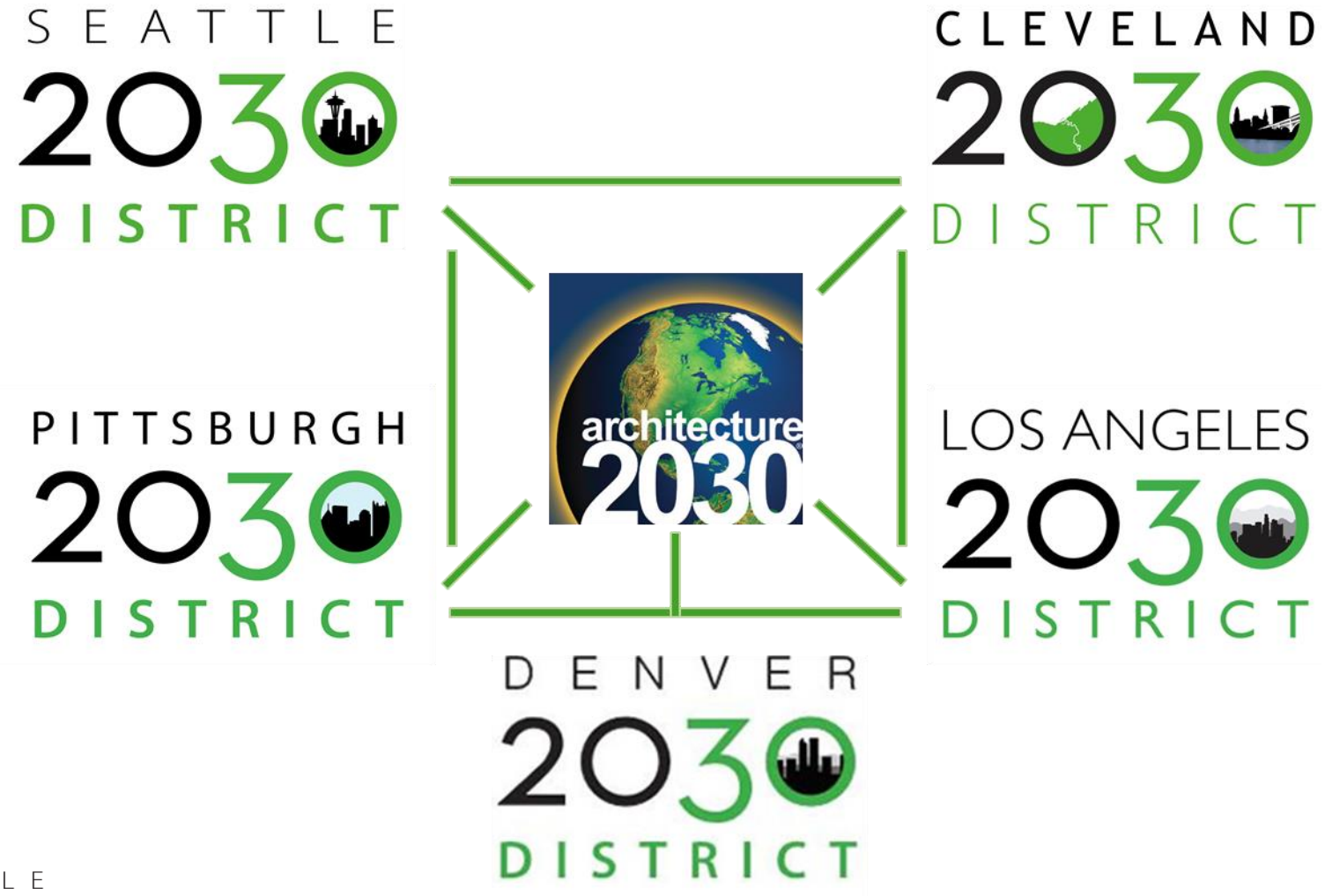
Seattle 2030 & Nissan Partnership

2030 Districts Network



SEATTLE 2030 DISTRICT

2030 Districts Network



SEATTLE 2030 DISTRICT

100M Square Feet Committed

More information

- For more information please visit our website at:

  2030districts.org/Seattle

- Follow us on Twitter @SEA2030
- matthewcombe@seattle2030districts.org

SEATTLE 2030 DISTRICT

Thank you!

SEATTLE 2030 DISTRICT