



**Holland**  
MICHIGAN

# City Council Regular Meeting

October 20, 2021

# Holland Community Energy Plan

2018-2021

Strategic Development Team  
Tactical Actions Close-out Report

City Council Regular Meeting – October 20, 2021

# 2010-2050

- Efficient generation
- Efficient uses
- Key community values
- Key metrics



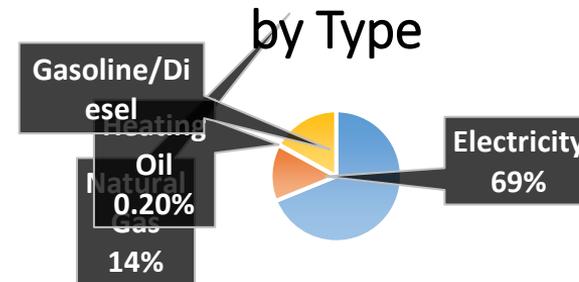
## Key Metrics

- Ensure economic competitiveness
  - Maintain electric rates at least 5% below MI investor owned utilities in all customer classes year-over-year
- Provide reliable and affordable energy
  - Maintain outage duration (SAIDI) and frequency (SAIFI) values at American Public Power Association (APPA) median or better
- Protect the environment
  - GhG emissions less than 10 MT CO<sub>2</sub>e per capita by 2050

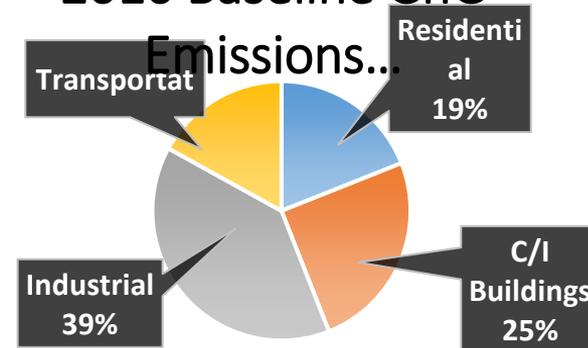
## Expected Results

- Manage carbon output in a robust economic climate that results from an **intense industrial concentration**
- Absorb significant population growth and still **use less fuel** than today
- Save millions per year, which could be spent **locally**
  - 30-50% energy efficiency gain
- Reduce GhG emissions per capita
  - 2010 – 24 metric tons
  - 2050 – 13.4 metric tons
  - **Goal – 10 metric tons**

### 2010 Baseline GhG Emissions



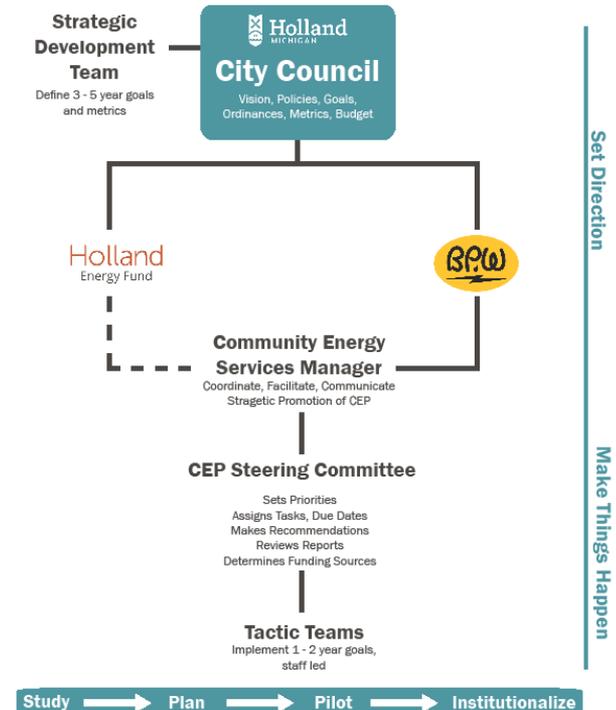
### 2010 Baseline GhG Emissions..



# 2017-18 CEP Strategic Development Team

- Council Member – Jay Peters
- Council Liaison to SusCom – Dave Hoekstra
- HBPW Board Chair – Tim Hemingway
- Hope College Science Dean – Dave Van Wylen
- Community Representative – Don Triesenberg
- Community Representative – Phil Meyer

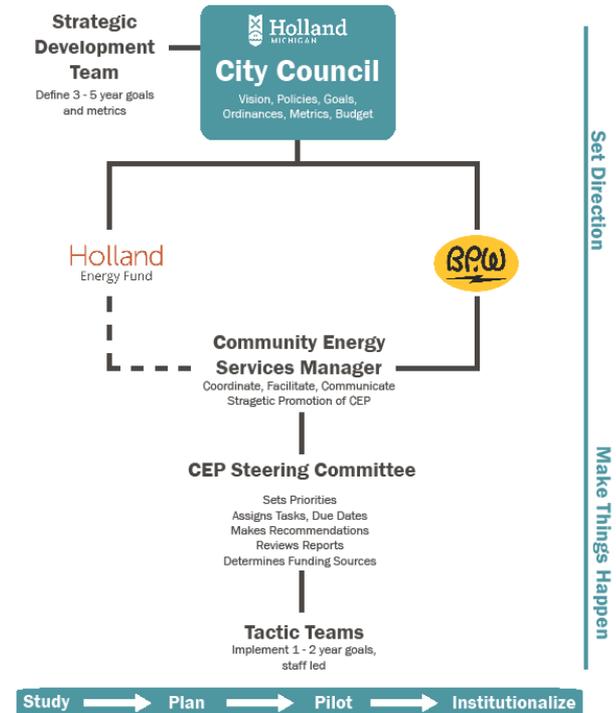
## Holland Community Energy Plan Governance 2019-2021



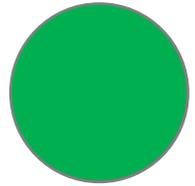
# CEP Steering Committee

- Established by Resolution R2012.61
- Current composition
  - City Manager – Keith Van Beek
  - HBPW General Manager – Dave Koster
  - Holland Energy Fund President – Lynn McCammon
  - HBPW Utility Services Director – Ted Siler
  - Community Representative – Jim Stelter
  - HBPW Community Energy Services Mgr – Anne Saliers
- Oversee implementation
  - Assign tasks, teams, due dates
  - Seek approval for plans from HBPW Board and City Council
  - Monitor progress

## Holland Community Energy Plan Governance 2019-2021



# 2021 Strategy Summary



- Strategies for 2018-2021 were grouped into 3 categories:
  - Buildings
  - Transportation
  - Education
- The Strategies aimed to achieve a combined **1.25 mt/capita** reduction
- The actual carbon reduction realized between 2018 and 2020 was **2.1 mt/capita**, exceeding the goal by nearly 70%

# 2021 Strategies

- Buildings  
(-0.78 MT GhG)

1. Promote Home Energy Retrofit participation
  - Goal – 250 homes/year
2. Create local Residential Energy Waste Reduction program
  - Goal – 3M 1<sup>st</sup> year kWh saved
3. Create local C&I Energy Waste Reduction program
  - Goal – 1.7M 1<sup>st</sup> year Commercial kWh saved
  - Goal – 6.8M 1<sup>st</sup> year Industrial kWh saved
4. Civic Center district heating
  - Goal – Monitor, measure, market performance



# 2021 Strategies

- Transportation  
(-0.47 MT GhG)

1. Incentivize and promote EV adoption in the private sector
  - Goal – 5X the state per capita average
2. Drive EV/alternative fuel adoption in the public sector
  - Goal – Develop an alternative fuel purchasing policy for all gas-powered vehicles and equipment
3. Create local team and follow technology change impacts on infrastructure
  - Goal – Engage the electric/autonomous vehicle industry and early implementers to learn how these changes in transportation can be best used to benefit Holland citizens and share this with the public through regular updates



# 2021 Strategies

- Education

1. Continue community energy education
  - Goal – Continue Living Sustainably Along the Lakeshore events and articles
  - Goal – Develop a multi-year plan
2. Calculate carbon footprint
  - Goal – Publish key CEP metrics annually
  - Goal – Calculate carbon footprint every other year and investigate registries for benchmarking other cities

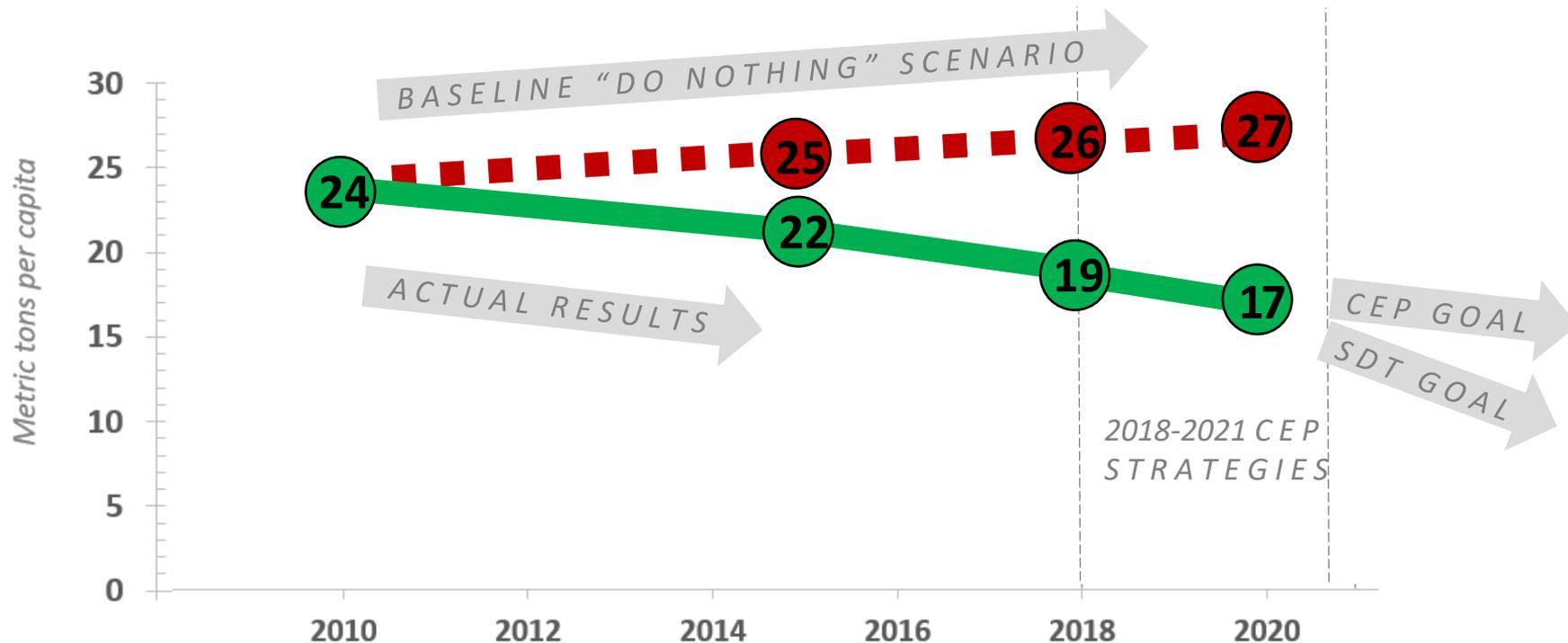


# Progress

City of Holland & Holland Board of Public Works Sustainability Timeline

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Michigan Public Power Agency (MPPA) Landfill Gas Project authorized	Holland Sustainability Committee Formed	Garforth International commissioned	BPW P21 Power	America in Bloom Outstanding Achievement Award: Environmental Effort	Urban Tree Canopy Assessment Completed	City cosponsors Living Sustainably Along the Lakeshore	Ground Broken on Holland Energy Park	James DeYoung Coal-fired Power Plant Decommissioned	Holland Energy Park Commercial Operation	Urban Tree Canopy Assessment Completed by Hope College	Power Purchase Agreement with Assembly Solar II authorized	City begins Sustainability Partnership with ODC Network	City hires first full-time Sustainability Manager
HBPW hires first Conservation Programs Manager (later known as Community Energy Services Manager)	HBPW begins Energy Waste Reduction program	GHG baseline assessed	CEP Adopted	CEP Task Forces Mobilized	District Energy Study	Holland Hope College Sustainability Institute is formed	America in Bloom Overall Winner	Home Energy Retrofit Program is launched	Project Clarity is Launched	Power Purchase Agreement with Assembly Solar I authorized	HBPW and City begin Energy Saving Trees program	City implements Hybrid/Electric Vehicle Purchasing Policy	City launches new recycling cart program
	Energy Conservation & Efficiency Plan for City Facility & Operations	Power Purchase Agreement with North American Natural Resources (landfill gas)		Holland Energy Park Combined Cycle Natural Gas Plant Approved	Holland Energy Park site selected	PA 408 signed into law allowing on-bill financing	Home Energy Retrofit pilot program conducted on 25 homes	City/BPW complete LED Pedestrian Lighting Retrofit	Power Purchase Agreement with Pegasus Wind Farm authorized	Power Purchase Agreement with Invenergy Solar authorized		Holland PD purchase Tesla for EV pilot program	Power Purchase Agreement with Hart Solar authorized

# Progress on Carbon Reduction



Questions?

# EXTRA/REFERENCE SLIDES

# 2021 Strategies - Buildings

Segment	2010 GhG Emissions	2010 MT GhG Emissions per capita	2017 est. MT GhG Emissions per capita	2021 Strategy	2021 Metric	2021 est. MT GhG Emissions per capita Goal
Residential Buildings	19%	4.6	3.3			3.0
				Secure funding for HER program leveraging 501(c)3 status	1,000 homes retrofitted, and capacity to retrofit 250 annually	-0.07
				Create local Residential EWR* program	3M 1 <sup>st</sup> -year kWh saved	-0.19
Non-residential Buildings	25%	6.0	3.6			3.5
				Create local Commercial EWR* program	1.7M 1 <sup>st</sup> year kWh saved	-0.10
				District heating for Civic Center	Operational	
Industrial	39%	9.4	7.1			6.9
				Create local Industrial EWR* program	6.8M 1 <sup>st</sup> year kWh saved	-0.42

\* Energy Waste Reduction - formerly Energy Optimization (EO) program

# 2021 Strategies – Transportation and Education

Segment	2010 GhG Emissions	2010 MT GhG Emissions per capita	2017 est. MT GhG Emissions per capita	2021 Strategy	2021 Metric	2021 est. MT GhG Emissions per capita Goal
Transportation	17%	4.0	3.0			2.5
				Incentivize EV adoption	EVs per capita highest in the state (1%/yr)	<b>-.47</b>
				Autonomous vehicle infrastructure needs assessment/mobility strategy	5-year capital plan	
Community Education						
				Secure funding for HHCSI	\$3M endowment established	
				Calculate carbon footprint	Key CEP metrics published annually	
Total	100%	24	17			15.75