# Agenda

9:00 to 9:20   Welcome, introductions, agenda review and updates, by Keith

 9:20 to 10:00   Wind Power Presentation by Tyler Huebner

10:00 to 10:30   Bio-methane Transportation Fuel Presentation by Keith

10:30 to 11:00   Discussion of CAP Reduction Targets & Modeling

11:00 to 11:40   Discussion of All Recommendations

11:40 to 12:00   CAP Production & Next Steps
.
Floating agenda item: Just Bakery intro by Carmella Glenn, Program Director

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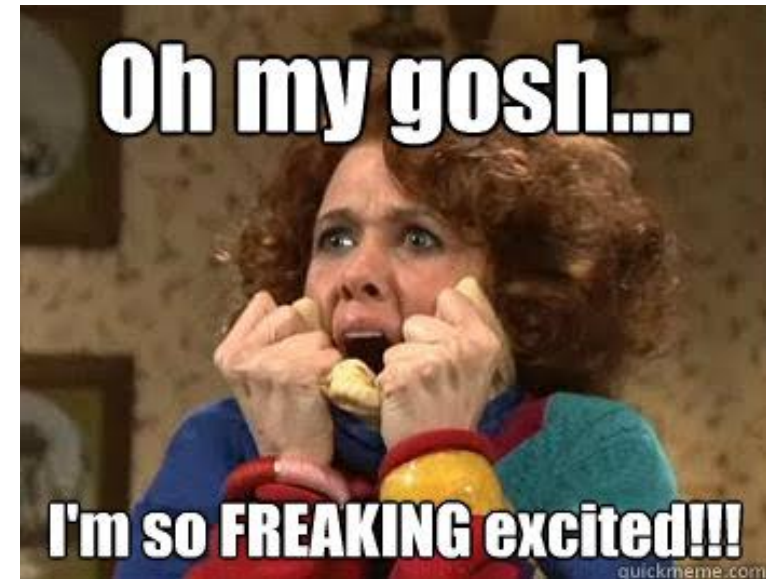
Updates

- Work Groups, mostly done for now

- Public Engagement Work Group & Branding

- Public Outreach to Underserved Communities

- Healthy Wisconsin Leadership Institute Team

- Please fill out the survey for final Council meeting

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DC4 Community Team

- Marcia Caton Campbell, Center for Resilient Cities

- Smilla Jepsen, Office of Energy & Climate Change

- Ally Burg, UW Office of Sustainability, UWCU

- Jeff Lafferty, Public Health Madison & Dane County

- Karl van Lith, City of Madison Human Resources

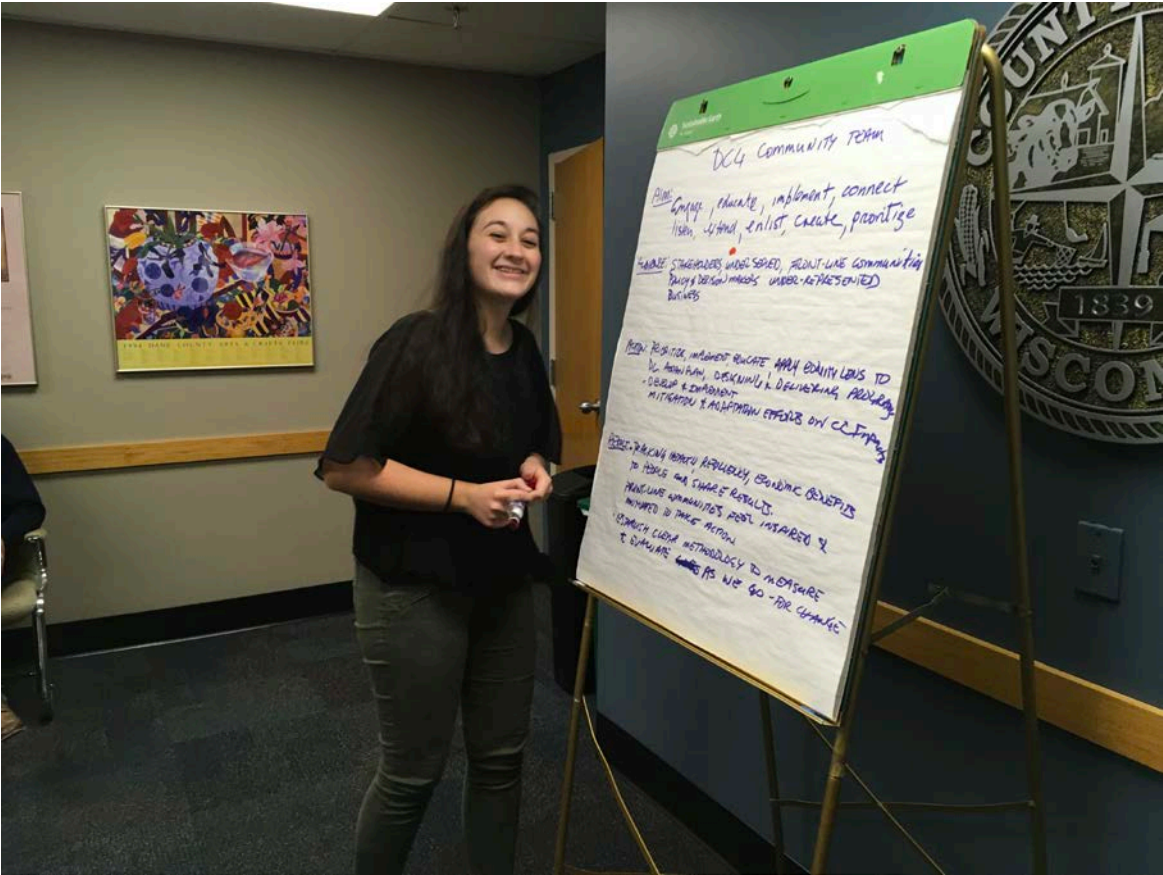Office of Energy
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Workshop 1 - Milwaukee

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Identify our Team's vision and mission

- Draft vision: Frontline communities feel inspired and motivated to take action on climate change impacts.

- Draft mission: To establish methodologies to track progress on people's abilities to deal with climate change impacts by listening and engaging particularly underserved communities.

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Racial Equity and Social Justice Initiative
RESJ Tool: Fast-Track Version

Mission of the Racial Equity and Social Justice (RESJ) Initiative: To establish racial equity and social justice as core principles in all decisions, policies and functions of the City of Madison.

Equity is just and fair inclusion into a society in which all, including all racial and ethnic groups, can participate, prosper, and reach their full potential. Equity gives all people a just and fair shot in life despite historic patterns of racial and economic exclusion (*www.policylink.org*).
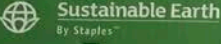
The persistence of deep racial and social inequities and divisions across society is evidence of bias at the individual, institutional and structural levels. These types of bias often work to the benefit of White people and to the detriment of people of color, usually unintentionally or inadvertently.

Purpose of this Tool: To facilitate conscious consideration of equity and examine how communities of color and low-income populations will be affected by a proposed action/decision of the City.

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- Listen to frontline communities.
- Identify needs and work towards prioritizing CAP proposals to meet them
- Establish a clear methodology to measure and evaluate health, resilience and economic benefits throughout the implementation phase of the CAP.

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Principles for Climate Justice

– Acknowledge that past policies and decisions maintain a system of injustice –

– Follow the leadership, knowledge and expertise of communities disproportionately impacted –

– Use racial and economic analysis to drive decisions –

– Use targeted strategies that create benefits for all –

– Create net environmental and economic benefits for communities of color and people with lower incomes –

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Bio-methane/Renewable Natural Gas (RNG) Transportation Fuel Recommendation

- Take Advantage of the nation-leading Dane Co landfill RNG production and fueling

- Take advantage of existing and expanded RNG fueling capacity to convert diesel HDV to clean RNG

- 11,975 HDV registered in Dane County

- Goal: convert 60 percent

of the HDV to RNG by 2026

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Rodefeld Landfill Bio-gas Facility -- Art

Rodefeld Landfill Bio-gas Facility -- Actual

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Southeast Highway Garage RNG Fueling Station

Renewable CNG Filling Station

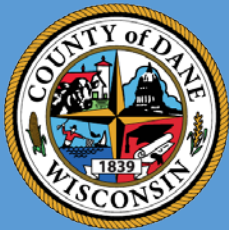Office of Energy
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Rodefeld Landfill & Southeast Campus

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Continuation of Goals Discussion

- IPCC Intermediate Goal of 45% below 2010 by 2030

- IPCC: all 1.5 C pathways include substantial CDR

- CDR = soil & forest sequestration and BECCS

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	A	B	C	D	E	F	G	H	I	J	K	L	M	O	P
1	City	State	Size	Year Target (or CAP) was Made	Baseline Year	Baseline Emissions (MT of CO2e)	Reduction	2015	2020	2025	2030	2040	2050	Status (% Reduction)	Status Year
2	Berkeley	CA	121,240	2009	2000	620,000			33%				80%		
3	Cincinnati	OH	298,800	2018	2006	7,800,000			24%		40%		84%	36.3%	2015
4	Boston	MA	673,184	2010	2005	7,440,000			25%				80%		
5	Porland	OR	639,863	2009	1990	8,989,460					40%		80%	21.0%	2014
6	Pittsburgh	PA	303,625	2017	2003	5,000,000			*20%		50%		80%		
7	Boudler	CO	108,090	2017	2005	1,991,998							80%	13.0%	2018
8	Austin	TX	950,715	2015	2010	14,050,168			20%		45%	70%	100%	7.0%	2016
9	Washington	DC	639,972	2015	2006	10,101,168		10%	20%		50%		80%		
10	Minneapolis	MN	413,651	2012	2006	5,700,000		15%	30%				80%	17.0%	2015
11	Cleveland	OH	385,809	2013	2010	12,791,996			16%		40%		80%		
12	Chicago	IL	2,705,000	2008	1990	32,300,000			25%				80%		2010
13	Minnesota	MN	5,577,000	2007	2005	164,800,000		15%		25%			80%	4.0%	2014
14	Atlanta	GA	486,290	2015	2009	10,000,300			20%		40%		80%		
15	Richmond	CA	110,040	2016	2005	693,426			15%		40%		80%		
16	Oakland	CA	425,195	2012	2005	3,433,986			36%				83%	Above target	2015
17	Ann Arbor	MI	120,782	2012	2000	2,190,000		8%		25%			90%	-0.8%	2010
18	Seattle	WA	704,352	2013	2008	3,647,000				40%	58%		100%		
19	Oberlin	OH	8,278	2013	2007	185,791		50%			75%		100%	47.7%	2015

|	A	B	C	D	E	F	G	H	I	J	K	L	M	O	P
1	City	State	Size	Year Target (or CAP) was Made	Baseline Year	Baseline Emissions (MT of CO2e)	Reductio	2015	2020	2025	2030	2040	2050	Status (% Reduction)	Status Year
20	Orlando	FL	280,257	2013	2007	5,803,851						90%	100%	25.0%	2018
21	Detroit	MI	672,795	2017	2012	10,600,000			10%		30%		80%		
22	Des Moines	IA	215,472	2015					25%		50%	100%			
23	New Orleans	LA	393,292	2017	2014	3,606,199			10%	30%	50%				
24	Eau Claire	WI	68,339	2018	2015	24791			5%		25%	30%	40%		
25	Middleton	WI	17,442	2018	-	-						100% Renewable			
26	La Crosse County	WI	118,212	2009	1990					25%?					
27	Copenhagen	DK	610,000	2009	2005	2,535,737		20% (goal exceed	100%					45.0%	2017
28	Aarhus	DK	340,000	2016	2006	1,970,083					100%				
29	Bergen	NO	265,900	2016	1991				30%		100%				
30	Freiburg	DE	222,200	2009	1992	2,000,000					40%		100%		
31	Stockholm	SE	825,000	2010	1990	3,700,000		43%					100%	45%	2015
32	Stockholm	SE	910,000	2016	2012	2,600,000			20%			100%			
33	Malmø	SE	340,000	2011	1990	2,500,000			40%		100%				
34	Oslo	NO	630,000	2014	1990	1,200,000			50%		90%			-2%	2015
35	Berlin	DE	3,500,000	2015	1990	30,000,000			40%		60%		100%	32%	2017
36	Helsinki	FI	640,000	2017	1990	3,700,000							60%	100%(by2035) 25%	2017
37	Paris	FR	2,200,000	2018	2004	25,000,000			25%		50%		100%	10%	2017

Modeling
SEE Ran 8 Baseline (BAU) Scenarios

- Power sector markets: two gas price and renewable technology cost scenarios from the recent MPSC Roadmap
- Electric vehicle costs: AEO costs vs. low costs
- EV charging profile: unmanaged vs. optimally managed
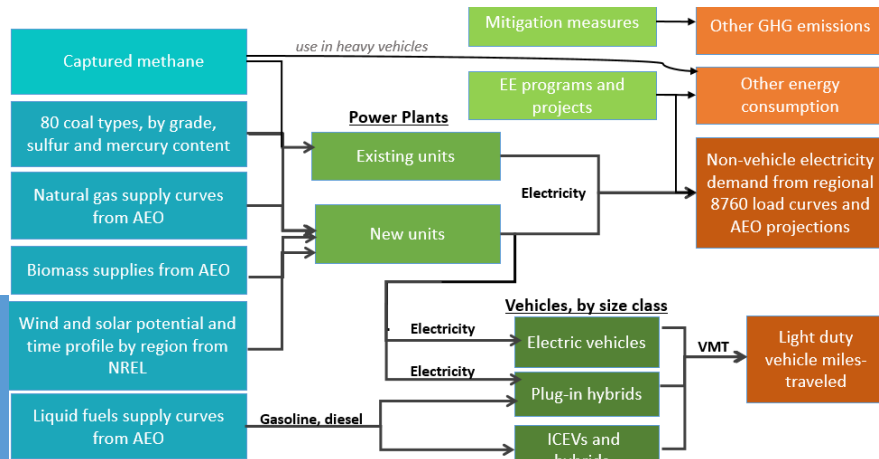
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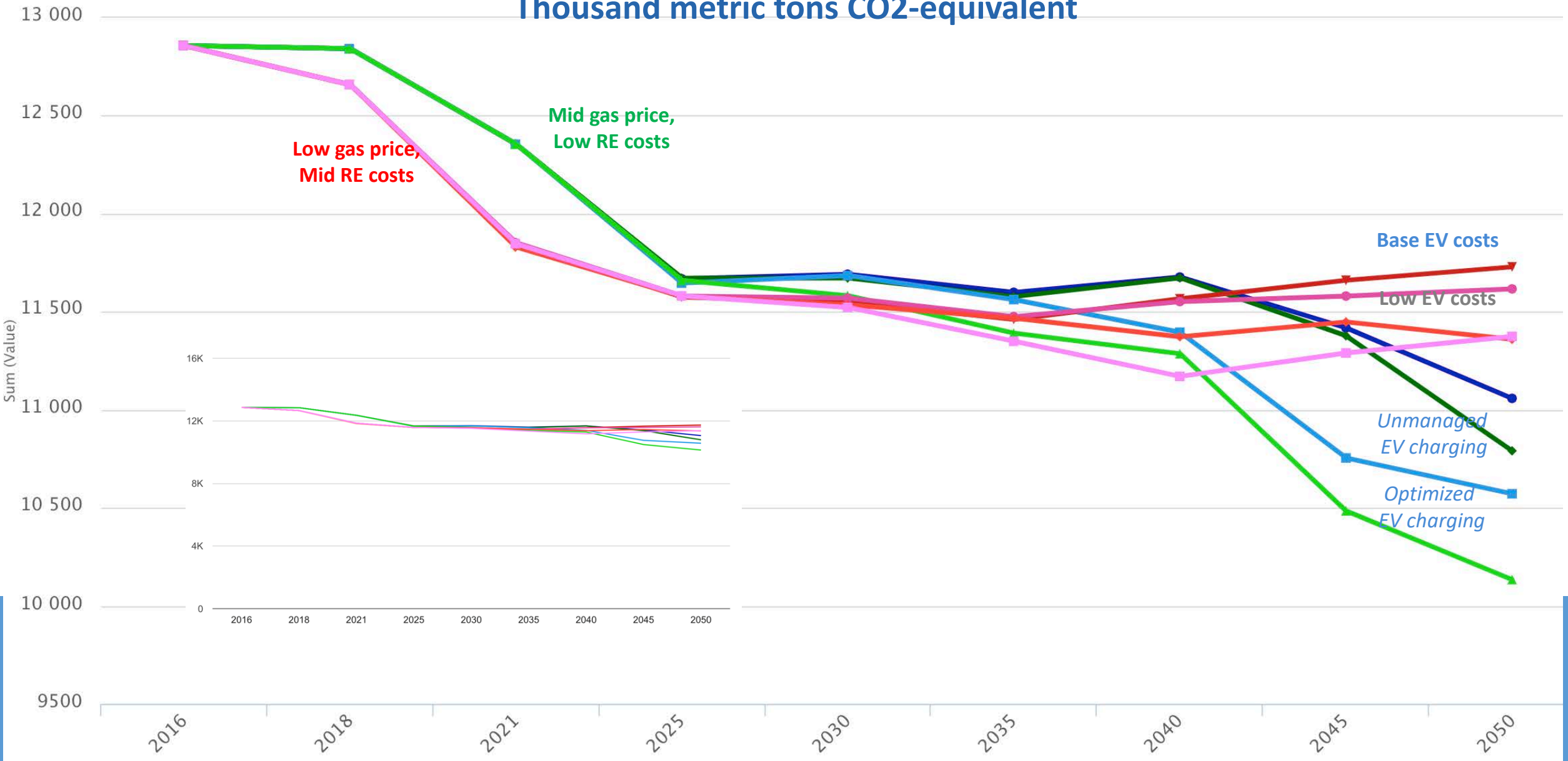
Key Advantage – MISO North BAU

http://roadmap.betterenergy.org/electricity/trajectory/
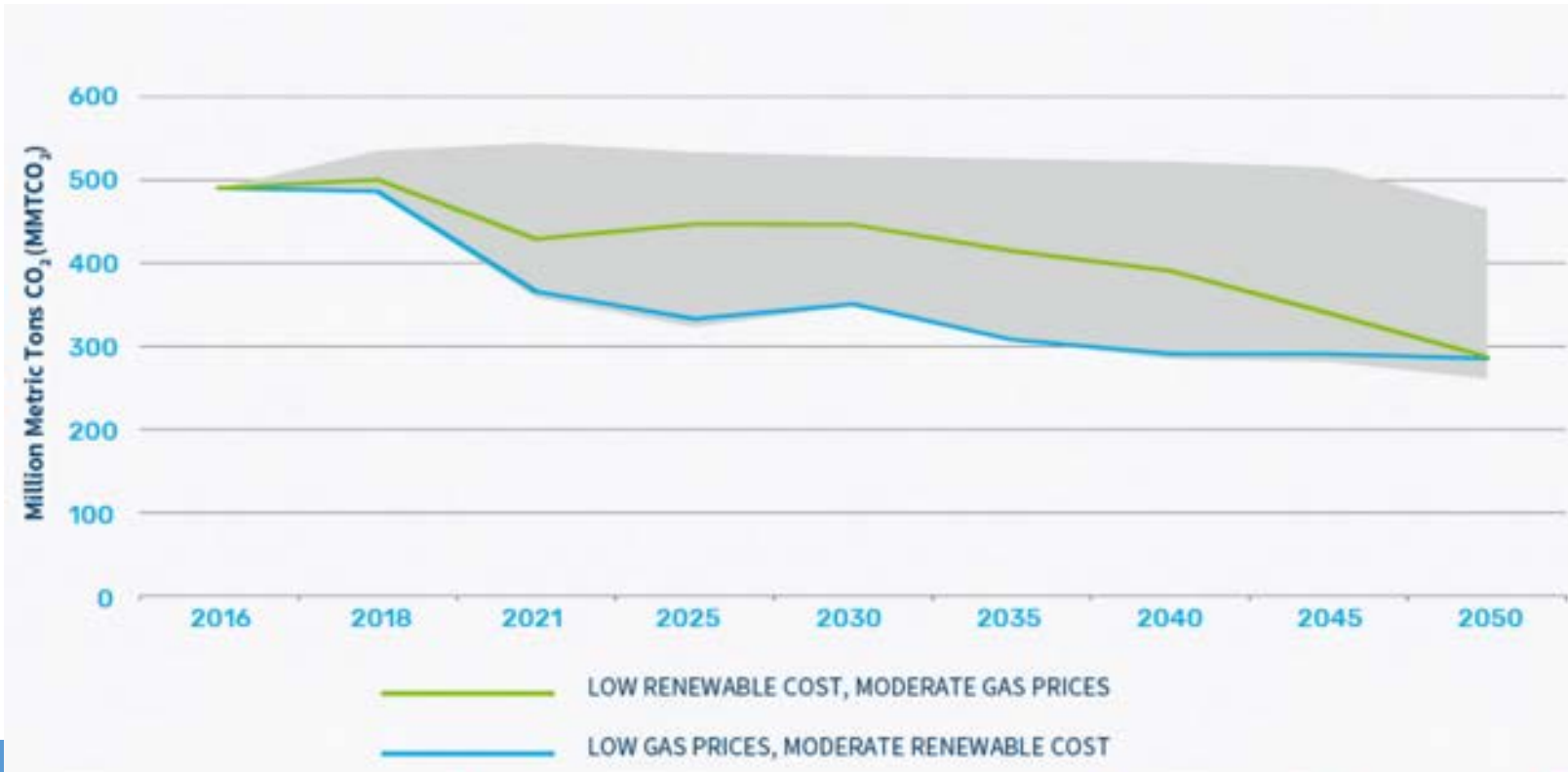
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Total CO2 Equivalent Emissions

Thousand metric tons CO2-equivalent

Mid gas price, Low RE costs

Low gas price, Mid RE costs

Base EV costs

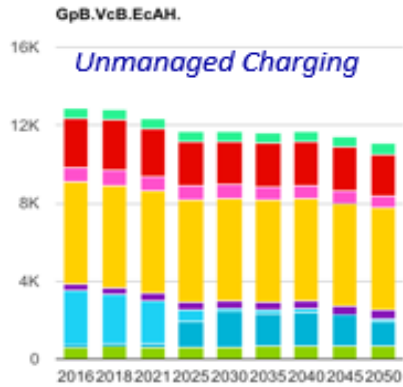**Low EV costs**

Unmanaged EV charging

Optimized EV charging
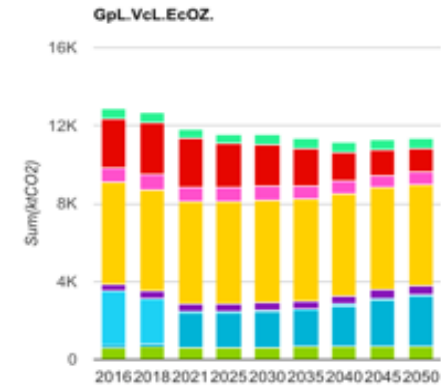
Emissions by sector

Thousand metric tons CO2-equivalent
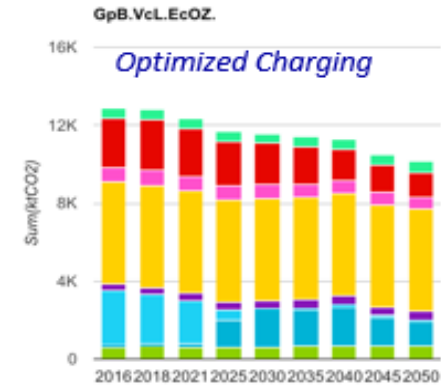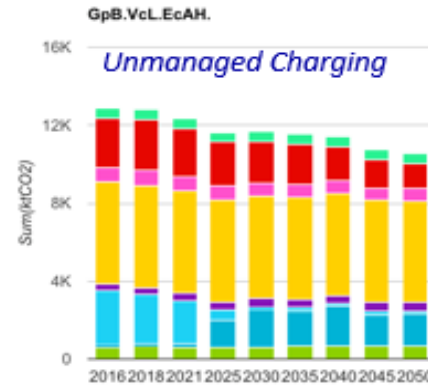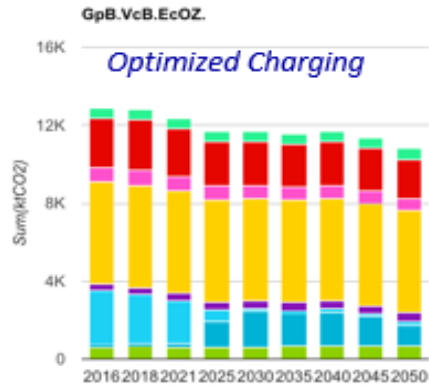
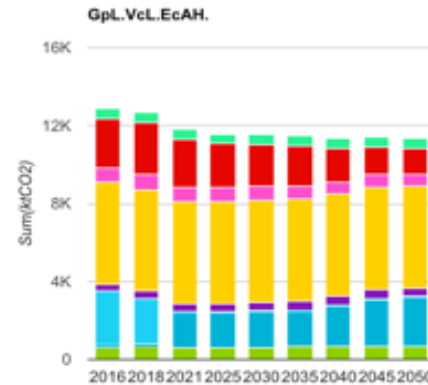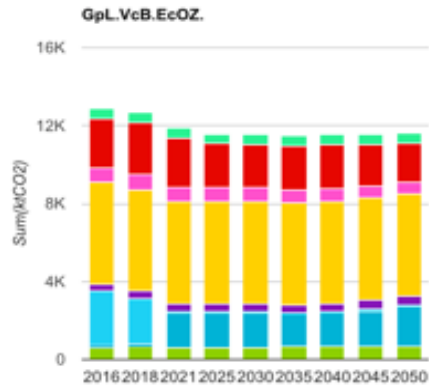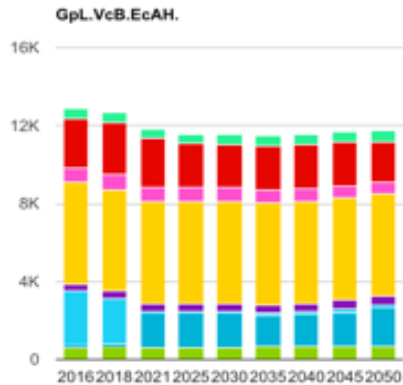- Energy efficiency: increase EE achievement by 25%
- Buildings guidelines, benchmarking, and promotion
  - Set target level
- Solar: 1200 MW target
- Storage goals/programs
- Municipal RE purchases
- Rural heat pumps to replace propane and fuel oil
- Reduce VMT
- Promote electric vehicles
- Carbon sequestration in soils and forests
- Decrease per capita water demand by 20%

Next:
Policy Runs

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Recommendations (for Policies, Programs & Projects)

1. Share the Recommendations
2. Comment on the Recommendations
3. Deadline for this round December 21st
4. Additional Recommendations from the Council by 1/11/19

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Dane County Office on Energy and Climate Change

Questions?

Comments?

Suggestions?

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