



# Agenda

## Sustainability Task Force

A Committee of the Chico City Council

Meeting of Thursday, October 11, 2018 – 5:30 p.m.

Municipal Center - 421 Main Street, Conference Room No. 1 in the Council Chambers

1. **CALL TO ORDER AND ROLL CALL**
2. **APPROVE AUGUST 23, 2018 MEETING MINUTES** - *Draft 08/23/18 minutes attached.*
3. **CONTINUE DISCUSSION AND COMMENTS ON DRAFT STF REPORT SUMMARIZING CITY'S STATUS IN IMPLEMENTING THE CLIMATE ACTION PLAN (STF Member Loker)** – The STF is preparing a draft report highlighting the City's status in implementing the CAP and achieving its GHG emissions reduction goal, and highlighting additional steps the City and community can take to meet GHG emission goals established by the State. The STF reviewed early draft report outlines and provided comments and direction at previous meetings. Discussion and comments will continue. See attached *Data and PowerPoint highlighting the City's status achieving GHG reductions, and recommendations for moving forward.*
4. **2018/19 CIVICSPARK INITIATIVE: UPDATE (CivicSpark Fellow Charter)** – The STF will receive an update regarding coordination with Butte County's Department of Public Health to develop an Extreme Heat Preparedness Plan for Chico, and other CivicSpark initiatives for the upcoming year.
5. **REPORTS & COMMUNICATIONS** - These items are provided for the STF's information. Although the STF may discuss the items, no action can be taken at the meeting. Should the STF determine that action is required, an item may be included on a subsequent agenda.
6. **BUSINESS FROM THE FLOOR** - Members of the public may address the STF at this time on any matter not already listed on the agenda, with comments being limited to three minutes. The STF cannot take any action at this meeting on requests made under this section of the agenda.
7. **ADJOURNMENT** - Next meeting scheduled for November 29, 2018.

**ATTACHMENT(S):** 08/23/18 STF Meeting Minutes (Draft)  
GHG Emissions Data By Sector  
PPT Highlighting Status of Achieving GHG Reductions and Conclusions

Agenda available from the City's website at [www.ci.chico.ca.us](http://www.ci.chico.ca.us) under "**Meetings/Agendas**"

Prepared: 10/03/18  
Posted: 10/03/18  
Prior to: 5:30 pm

Community Development Department  
421 Main Street, 2<sup>nd</sup> Floor, Chico, CA 95928  
(530) 879-6800



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### **Sustainability Task Force Members:**

Cheri Chastain, Vice Chair  
Lucas RossMerz

Dave Donnan  
Mark Stemen, Chair

William Loker

**CITY OF CHICO SUSTAINABILITY TASK FORCE  
MINUTES OF THE MEETING OF  
AUGUST 23, 2018**

Municipal Center  
421 Main Street  
Council Chambers, Conference Rm. 1

STF Members Present:           Mark Stemen, Chair  
  Cheri Chastain, Vice Chair  
  Dave Donnan  
  William Loker

STF Members Absent:           Lucas RossMerz

Staff Members Present:        Brendan Vieg, Deputy Director, CDD

Guests Present:                Gordon Gregory  
  Robert Speer  
  Florin Barnhart  
  D. Garcia

**1. CALL TO ORDER**

Chair Stemen called the meeting to order at 5:33pm. STF members, City staff, and guests were present as noted.

**2. APPROVE JULY 12, 2018 MEETING MINUTES**

*The 07/12/18 STF Meeting Minutes were approved 4-0-1 (RossMerz absent).*

**3. CONTINUE DISCUSSION AND COMMENTS ON DRAFT STF REPORT OUTLINE SUMMARIZING CITY'S STATUS IN IMPLEMENTING THE CLIMATE ACTION PLAN**

STF member Loker provided an assessment of the City's efforts in implementing the CAP and achieving its GHG emissions reduction goal, as well as suggestions for next steps. Highlights of the presentation included: 1) the CAP underestimated total GHG emissions for Chico for the 2005 baseline year; 2) based on the underestimated 2005 baseline information, as well as new and more reliable GHG emission data sources, CAP targets are difficult to meet; 3) if more reliable 2005 baseline estimates are utilized, the City may have met or exceeded its 25% reduction goal; 4) the Transportation Sector is the largest contributor to the GHG emissions in Chico, and based on fuels data there has been a significant decline in GHG emissions; 5) the STF should verify data sources and GHG reductions; 6) given the current uncertainty over baseline and targets, the STF needs to take a cautious approach to the public dissemination of progress toward implementing the CAP

until data has been confirmed; and 7) despite both the City's and State's initial success in meeting early GHG emission reduction goals, climate change is happening and the City needs to continue taking steps to implement adaptation and resiliency measures.

The STF discussed the following topics and provided the following comments and direction:

- Staff to review and confirm GHG emissions data sources for accuracy
- The STF should share results of its efforts with the City Council and community, and also make a future recommendation that the City commit to achieving new GHG emission reduction goals set by the State in 2016 with passage of SB 32 (e.g., 40% reduction by 2030)
- Consider recommending to Council that the CAP be updated to reflect new State GHG emission reduction goals and identify new actions to achieve the goals
- There needs to be an acknowledgment that the City's efforts to reduce GHG emissions isn't a static effort due to ongoing development activity
- Regardless of GHG emission reduction efforts and the setting of new goals, there needs to be a recognition that climate change is happening and continued steps to implement adaptation and resiliency measures
- The points above should be reconciled, summarized, and presented to Council by January 2019

#### **4. CHICO CHAPTER OF CITIZENS' CLIMATE LOBBY**

Gordon Gregory and Robert Speer from the Chico Chapter of Citizens' Climate Lobby (CCL) introduced the organization and its efforts to promote federal action on climate change. CCL has a particular focus on promoting a federal carbon fee and dividend program related to fossil fuels at the source (mine, well, or port). Collected fees would be returned to U.S. households in the form of a dividend. It is anticipated that the fee would reduce GHG emissions by 50% in 20 years, create jobs, and save lives. The fee would also make the work of the STF easier by incentivizing individuals and industries to reduce their energy use, reduce vehicle miles traveled, etc. The local chapter is also working to create a mutual aid network of environmental and sustainable organizations to the help lobby (e.g., phone calls, letters) state and federal legislators on important topics.

*The STF will provide a general letter of support for CCL's efforts.*

#### **5. REPORTS & COMMUNICATIONS**

Deputy Director Vieg shared that the City is developing a fuels reduction plan for Lower Bidwell Park, that a new CivicSpark Fellow has been chosen for the 2018/19, and that the Residential Remodel Retrofit Ordinance will be considered by Council at its September 4, 2018 meeting.

STF member Chastain provided an update on the Butte County/City of Chico Community Choice Aggregation effort.

6. **BUSINESS FROM THE FLOOR**

Florin Barnhart Lauren Ayers asked about City hydration stations (water fountains retrofitted to fill bottles), if there were any, and if more could be added.

7. **ADJOURNMENT**

There being no further business from the STF, the meeting adjourned at 6:54pm to the meeting of Thursday, October 11, 2018.

\_\_\_\_\_  
Date Approved

Brendan Vieg, Deputy Director, CDD

Year	Chico Gals		MtCO2e/gal		MtCO2e		Total
	Chico Gals Gas	Diesel	MtCO2e/gal gas	Diesel	MtCO2e gas	Diesel	
2005	30,167,879	15,604,197	0.00879	0.01022	265,145	159,490	424,636
2006	29,086,753	16,017,892	0.00879	0.01022	255,643	163,719	419,362
2007	32,014,382	16,237,030	0.00879	0.01022	281,374	165,959	447,333
2008	28,750,856	16,393,090	0.00879	0.01022	252,691	167,554	420,245
2009	26,776,961	12,213,811	0.00879	0.01022	235,343	124,837	360,180
2010	26,806,872	12,094,927	0.00879	0.01022	235,606	123,622	359,228
2011	25,755,939	12,647,934	0.00879	0.01022	226,369	129,275	355,643
2012	24,834,712	11,969,633	0.00879	0.01022	218,272	122,342	340,614
2013	25,684,590	12,129,518	0.00879	0.01022	241,692	115,594	357,286
2014	25,424,269	12,350,114	0.00879	0.01022	239,242	117,697	356,939
2015	23,021,357	10,495,648	0.00879	0.01022	216,631	100,023	316,654
2016	20,916,715	9,363,905	0.00879	0.01022	196,826	89,238	286,064
2017	20,597,450	9,965,177	0.00879	0.01022	193,822	94,968	288,790

	Com kWh	Res kWh	Total kWh	MT CO2e/kWh	MT CO2e
2005	253,549,926.0	201,846,075.0	455,396,001.0	0.0002218	101,006.83
2006	258,271,030.0	225,498,202.0	483,769,232.0	0.0002068	100,043.48
2007	265,462,971.0	236,116,144.0	501,579,115.0	0.0002884	144,655.42
2008	262,254,185.0	241,132,537.0	503,386,722.0	0.0002908	146,384.86
2009	272,931,694.0	242,710,409.0	515,642,103.0	0.0002608	134,479.46
2010	274,409,744.0	235,293,204.0	509,702,948.0	0.0002019	102,909.03
2011	257,969,630.0	240,599,993.0	498,569,623.0	0.0001783	88,894.96
2012	262,885,148.0	246,152,139.0	509,037,287.0	0.0002014	102,520.11
2013	261,174,969.0	241,700,606.0	502,875,575.0	0.000194	97,557.86
2014	257,592,115.0	239,074,944.0	496,667,059.0	0.000197	97,843.41
2015	257,774,809.0	231,445,253.0	489,220,062.0	0.000184	90,016.49
*2016	250,719,465.0	226,124,190.0	476,843,655.0	0.00019094	91,048.53
*2017	249,720,494.0	235,187,470.0	484,907,964.0	0.00019094	92,588.33

	Com Therms	Res Therms	Total Therms	Conversion	MT CO2e
2005	8,133,681	11,007,290	19,140,971	0.005307	101,581
2006	8,604,247	12,255,141	20,859,388	0.005307	110,701
2007	8,208,145	12,692,043	20,900,188	0.005307	110,917
2008	8,309,927	12,847,934	21,157,861	0.005307	112,285
2009	8,411,096	13,040,424	21,451,520	0.005307	113,843
2010	8,679,168	13,235,049	21,914,217	0.005307	116,299
2011	9,007,071	14,143,971	23,151,042	0.005307	122,863
2012	8,622,453	13,202,811	21,825,264	0.005307	115,827
2013	9,080,771	13,177,876	22,258,647	0.005307	118,127
2014	5,353,650	11,103,645	16,457,295	0.005307	87,339
2015	5,322,271	11,073,709	16,395,980	0.005307	87,013
2016	5,680,168	11,753,387	17,433,555	0.005307	92,520
2017	5,917,150	12,204,431	18,121,581	0.005307	96,171

	Tons to Landfill	MT CO2e/Ton	MT CO2e
2005	88,307	0.283500	25,035
2006	87,413	0.283500	24,782
2007	94,759	0.283500	26,864
2008	90,747	0.283500	25,727
2009	75,537	0.283500	21,415
2010	75,295	0.283500	21,346
2011	74,984	0.283500	21,258
2012	74,890	0.283500	21,231
2013	74,107	0.283500	21,009
2014	69,595	0.283500	19,730
2015	74,105	0.283500	21,009
2016	76,341	0.283500	21,643
2017	82,440	0.283500	23,372

	MtCO2e Transportation	MtCO2e Energy	MtCO2e Solid Waste	Total MtCO2e
2005	424,636	202,588	25,035	652,259
2006	419,362	210,744	24,782	654,888
2007	447,333	255,573	26,864	729,770
2008	420,245	258,670	25,727	704,641
2009	360,180	248,323	21,415	629,917
2010	359,228	219,208	21,346	599,782
2011	355,643	211,758	21,258	588,659
2012	340,614	218,347	21,231	580,192
2013	357,286	215,685	21,009	593,980
2014	356,939	185,182	19,730	561,851
2015	316,654	177,030	21,009	514,693
2016	286,064	183,568	21,643	491,275
2017	288,790	188,760	23,372	500,921

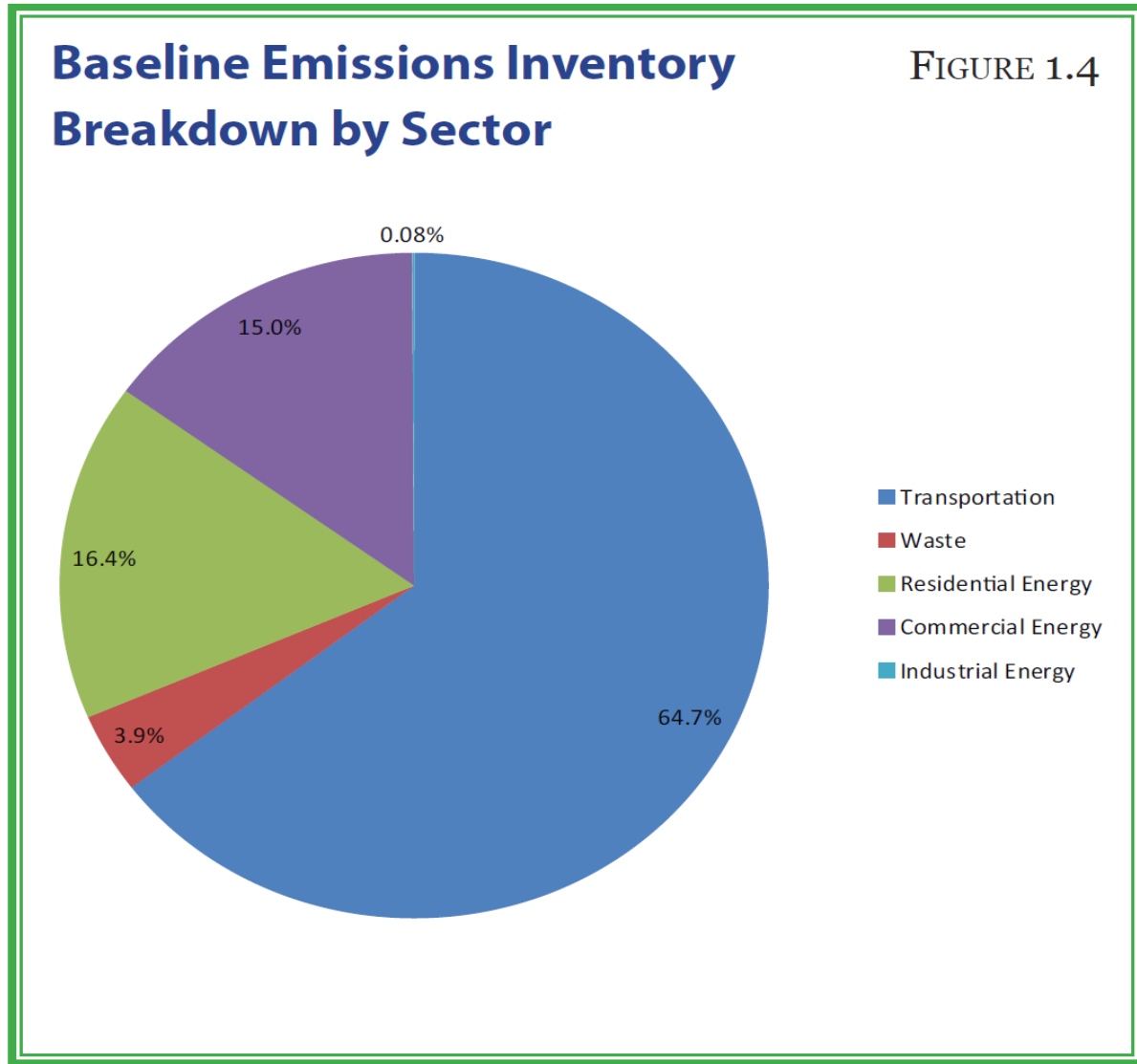
# Climate Action Plan: Actual and Targeted Reductions in Greenhouse Gasses

Preliminary analysis by Bill Loker

DRAFT 2 for discussion only

August 31, 2018

# CAP – estimate of GHG Sources (%)



Note importance of Transportation sector

Source: City of Chico, CAP pg 1-17



# CAP Targets

## Emissions Comparison

TABLE 2.1

Sector	Metric Tons of CO2e			
	2005	BAU 2020	2020 Goal	Total Reduction
Energy	161,743	201,584	54,393	147,191
Transportation	332,602	468,485	318,401	150,084
Solid Waste	19,987	25,435	14,174	11,261
Community Outreach	N/A	N/A	N/A	1,219
<b>Total</b>	<b>514,332</b>	<b>695,504</b>	<b>386,968</b>	<b>309,755</b>

Note: CAP projects a 5% decrease in GHGs from Transportation and a 66% decrease in Energy and a 30% decrease in Solid Waste GHGs compared to 2005 baseline. Overall CAP strives for a 25% decrease in GHGs from 2005 baseline.

# Revised GHG Estimates of Transportation Sector, 05-17

Year	Chico Gals Gas	Chico Gals Diesel	MtCO2e/gal gas	MtCO2e/gal Diesel	MtCO2e gas	MtCO2e Diesel	MtCO2e Total
2005	30,167,879	15,604,197	0.00879	0.01022	265,145	159,490	424,636
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2017	20,597,450	9,965,177	0.00879	0.01022	193,822	94,968	288,790

**Transportation GHGs have declined ~ 33% 05-17. (Source: Data from City of Chico)**

# Revised GHG Estimates of Energy Sector, 05-17

	Com kWh	Res kWh	Total kWh	MT CO2e/kWh	MT CO2e
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2014	5,353,650	11,103,645	16,457,295	0.005307	87,339
2015	5,322,271	11,073,709	16,395,980	0.005307	87,013
2016	5,680,168	11,753,387	17,433,555	0.005307	92,520
2017	5,917,150	12,204,431	18,121,581	0.005307	96,171

Notes: Electricity use increased 05-17, but grid sources from PG&E got cleaner so conversion factor changes year-to-year. Overall Electricity GHGs declined 8%. Natural gas GHGs declined 5%. In both cases, the declines came exclusively from the commercial sector. Overall Energy sector GHGs declined 7% from 2005-2017. (Sources: PG&E for conversion factors, Data from City of Chico. \*Conversion factor for 2016, 17 estimated from average of previous 5 years.)

# Revised GHGs Solid Waste, 05-17

	Tons to Landfill	MT CO2e/Ton	MT CO2e
2005	88,307	0.283500	25,035
2006	87,413	0.283500	24,782
2007	94,759	0.283500	26,864
2008	90,747	0.283500	25,727
2009	75,537	0.283500	21,415
2010	75,295	0.283500	21,346
2011	74,984	0.283500	21,258
2012	74,890	0.283500	21,231
2013	74,107	0.283500	21,009
2014	69,595	0.283500	19,730
2015	74,105	0.283500	21,009
2016	76,341	0.283500	21,643
2017	82,440	0.283500	23,372

Solid Waste is a relatively minor contributor to GHGs overall: about 4% (Figure 1.4, first slide). GHGs from Solid Waste declined about 7% from 05-17.

Source: Data from City of Chico GSD.

# Where are we relative to CAP Targets?

		MtCO <sub>2</sub> e				
Sector		2005 Baseline	2017 Actual	2020 Target	% 2020 Target	% Reduction 05-17
Transportation	CAP 2010	332,602	288,790	318,401	9% below	13%
	Revised	424,636	288,790	318,401	9% below	32%
Energy	CAP 2010	161,743	188,760	54,593	3.5X over	8.5% increase
	Revised	202,588	188,760	54,593	3.5X over	7% decrease
Solid Waste	CAP 2010	19,987	23,372	14,174	24% over target	17% increase
	Revised	25,035	23,372	14,174	24% over target	9% decrease
Total	CAP 2010	514,332	500,922	386,968	80%	2.6%
	Revised	652,259	500,922	*489,194	97%	23%

This Table presents estimates of 2005 baseline GHGs from the CAP 2010 and *Revised* baseline estimates based on current data. Note that current data on GHGs from 05-17 indicate that the *CAP underestimated* 2005 GHGs, our baseline year. This makes targets more difficult to achieve. Revised baseline data indicate we are reaching CAP target of 25% reduction in GHGs

\* Revised Target = 25% reduction from revised 2005 baseline

# Where are we relative to CAP Targets, 2005-17, Revised data?

	MtCO2e Transportation	MtCO2e Energy	MtCO2e Solid Waste	Total MtCO2e
2005	424,636	202,588	25,035	652,259
2006	419,362	210,744	24,782	654,888
2007	447,333	255,573	26,864	729,770
2008	420,245	258,670	25,727	704,641
2009	360,180	248,323	21,415	629,917
2010	359,228	219,208	21,346	599,782
2011	355,643	211,758	21,258	588,659
2012	340,614	218,347	21,231	580,192
2013	357,286	215,685	21,009	593,980
2014	356,939	185,182	19,730	561,851
2015	316,654	177,030	21,009	514,693
2016	286,064	183,568	21,643	491,275
2017	288,790	188,760	23,372	500,921

The revised baseline is significantly higher than the CAP estimated in 2010. The reductions in GHG emissions have not been as predicted in the CAP. Transportation has declined much more than anticipated in CAP targets. Energy and solid waste much less so. **Overall, the City's best estimate of GHGs indicates a 23% decline in emissions from 2005-2017.** This is very close to the 25% reduction target set by the City in the CAP.

# Preliminary Observations

1. The CAP appears to have *seriously underestimated* total GHG emissions in the City of Chico for the 2005 baseline year.
2. Because the baseline is underestimated, CAP targets derived from the baseline are extremely difficult to meet.
3. Targets were formulated differentially by sector
  1. GHGs from Transportation were projected to decrease by 5%
  2. GHGs from Energy were projected to decrease by 66%
  3. GHGs from Solid Waste were projected to decrease 30%
4. Progress toward (unrealistic) targets derived from (inaccurate) baseline has been modest. If *revised* 2005 baseline estimates are correct, the City is very close to its 25% reduction target.

# Preliminary Observations (cont'd)

5. The Transportation sector is the major contributor to GHGs in the City of Chico; Transportation GHGs have experienced a 33% decline.
6. The slight decline in GHG emissions from the energy sector are due entirely to reductions in the commercial sector. Residential energy use (electricity and gas) has increased. GHG reductions come from the commercial sector, and cleaner electrical power from PG&E.
7. There are some worrisome counter-trends in these data. Recent diesel consumption is up. Solid Waste tonnage increased from 2015-2017. As noted, residential energy use is up. People have not adopted energy saving measures sufficiently in their homes – and /or population growth is overtaking any efficiency and conservation gains.



# Preliminary Observations (cont'd)

8. The STF needs to revisit the CAP in terms of how baseline data on GHGs were determined and revise if necessary.
9. The STF should reconsider how targets were set and revise if necessary.
5. Once uncertainty over baseline and targets is resolved, the STF should share the positive progress made in reducing GHGs, along with worrisome trends that need to be addressed.
6. Despite the City's and the State of California's efforts, climate change is happening and the City needs to take steps to address its impacts.