Agenda
Sustainability Task Force

A Committee of the Chico City Council

Meeting of Thursday, January 10, 2019 – 5:30 p.m.
Municipal Center - 421 Main Street, Conference Room No. 1 in the Council Chambers

1. **CALL TO ORDER, INTRODUCTION OF NEW MEMBERS, AND ROLL CALL**

2. **APPROVE OCTOBER 11, 2018 MEETING MINUTES** - *Draft 10/11/18 minutes attached*.

3. **SUMMARY REGARDING CHICO'S STATUS IN IMPLEMENTING ITS CLIMATE ACTION PLAN (CAP) (Chair Stemen) –** STF member Loker has prepared a summary report highlighting the City's status in implementing the CAP and achieving its 2020 GHG emissions reduction goal. The STF reviewed earlier drafts of the data at previous meetings and provided comments. The STF will decide whether to use the high level GHG emission data for determining total GHG emissions for Chico moving forward. See attached *Chico GHG Emissions Reduction Summary and Data.*

4. **DRAFT SUSTAINABILITY TASK FORCE UPDATE TO COUNCIL (Deputy Director Vieg/Chair Stemen) –** A draft memo to Council has been prepared highlighting the City's efforts in achieving its GHG emissions reduction goal, new State GHG emission targets, and STF achievements. The draft memo also includes recommendations to Council to adopt new GHG emission reduction targets, prepare a new CAP to achieve the new targets, formalize the STF into a standing committee, and provide staff support. The draft memo will be considered for review and approval of the STF. Attached is the *Draft Memo to Council* and *Information on the State's 2030 GHG Emission Reduction Target*.

5. **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.

6. **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.

7. **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.

8. **ADJOURNMENT** - Next meeting scheduled for February 28, 2019

ATTACHMENT(S): 10/11/18 STF Meeting Minutes (Draft)
Chico GHG Emissions Reduction Summary and Data
DRAFT Memo Update to Council
State 2030 GHG Emission Reduction Goal/Fact Sheets

Agenda available from the City's website at www.ci.chico.ca.us.under ***"Meetings/Agendas"***

Prepared: *01/03/19*
Posted: *01/03/19*
Prior to: 5:30 pm

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

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Sustainability Task Force Members:

Mark Stemen, Chair
Cheri Chastain, Vice Chair
Danielle Baxter
Dave Donnan
William Loker
Molly Marcussen
Lucas RossMerz

CITY OF CHICO SUSTAINABILITY TASK FORCE
MINUTES OF THE MEETING OF
OCTOBER 11, 2018

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

STF Members Present:	Mark Stemen, Chair Dave Donnan William Loker
STF Members Absent:	Cheri Chastain, Vice Chair Lucas RossMerz
Staff Members Present:	Brendan Vieg, Deputy Director, CDD Courtney Charter, CivicSpark Fellow
Guests Present:	Florin Barnhart

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 AUGUST 23, 2018 MEETING MINUTES

The 08/23/18 STF Meeting Minutes were approved 3-0-2 (Chastain and RossMerz absent).

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

Utilizing revised and updated GHG emission data through 2017, 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) if more reliable 2005 baseline estimates are utilized, the City is very close to reaching its 25% reduction goal; 3) 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; 4) the slight decline in GHG emissions from the Energy sector are due to reductions in the commercial sector --- the GHG reductions come from cleaner electrical power from PG&E; 5) there are worrisome counter trends in the data, including recent increases in diesel consumption, solid waste tonnage increases, and increases in residential energy use, which highlight that people have not adopted energy saving

measures sufficiently and/or population growth is overtaking any efficiency and conservation gains; and, 6) 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:

- Waste haulers implementation of the Waste Franchise Agreement may aid in reducing waste tonnage, as well as vehicle miles travelled, moving forward
- The success of increased recycling under the Waste Franchise Agreement is concerning
- STF Chair Stemen and Member Loker agreed to review the original GHG emission data included in the CAP to determine why there are discrepancies with the high level GHG emission data sources
- Deputy Director Vieg agreed to review the recent State-level GHG emission inventory to identify possible reasons for trends in reductions
- The STF will incorporate the results of its efforts in its Annual Update Report to Council in 2019, and also make a recommendation that the City update the CAP to reflect new State GHG emission reduction goals and identify new actions to achieve the goal

STF Member Donnan made a motion that the STF officially use the high level GHG emission data for determining total GHG emissions for Chico. Motion seconded by STF Member Loker. Following discussion about the need to verify the original GHG emission data estimates in the CAP, the motion was tabled.

4. 2018/19 CIVICSPARK INITIATIVE: UPDATE

CivicSpark Fellow Charter provided the STF with an update regarding development of an Extreme Heat Preparedness Plan for Chico, and other CivicSpark initiatives for the upcoming year. Charter has met with staff at Butte County Department of Public Health, CUSD Facilities, and Chico State Environmental Health. Charter is seeking to identify a good template to use at the "city" level as most plans are done at the County level. She will be investigating opportunities for cooling centers as well.

5. REPORTS & COMMUNICATIONS

Deputy Director Vieg shared that there are number of new private and public EV fueling stations being developed throughout the City. The STF suggested that a Facebook contest be initiated that challenges the community to locate all the EV fueling stations throughout the community.

6. BUSINESS FROM THE FLOOR

None.

7. ADJOURNMENT

There being no further business from the STF, the meeting adjourned at 6:30pm to the meeting of Thursday, November 29, 2018.

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Date Approved Brendan Vieg, Deputy Director, CDD

City of Chico Greenhouse Gas Emissions for 2005 to 2017: Trends of Emissions and Other Indicators

Executive Summary

- In 2010, the City Sustainability Task Force drafted a Climate Action Plan (CAP). The CAP used 2005 as the baseline year from which City progress toward the 2020 goal of a 25% reduction in Greenhouse Gas (GHG) emissions would be measured. In 2017, the City Sustainability Task Force reviewed the estimates generated for 2005 and revised the baseline upward in light of better emission estimates. The 2010 CAP estimated 2005 GHGs at 514,332 metric ton equivalents (MTe) of CO_2. The revised estimate for 2005 is 652,258 MTe.
- The current estimate of City GHG emissions in 2017 is 500,922 MTe. This represents a decrease in overall GHG emissions of about 23% from the (revised) baseline year of 2005 to 2017.
- The largest reductions in the City's GHGs came from the transportation sector, where data from sales of gasoline and diesel fuel indicate a 32% reduction in GHGs from 2005-20017. (See Table 1.)
- The electricity sector (combining commercial and residential) saw a 7% decrease in GHG emissions. This reduction is due entirely to changes in the sources of electricity distributed by PG&E, and increases in rooftop solar. Overall, electricity consumption actually *increased* about 6% from 2005-2017. (See Table 2.) Natural gas consumption decline about 5% in the same period. (see Table 3.) Both electricity and natural gas consumption declined in the Commercial sector while increasing in the Residential sector.
- The City also tracks GHGs from the solid waste sector. GHGs from solid waste declined about 9% from the (revised) 2005 baseline estimates to 2017. (See Table 4.)

Overview of Emission Trends by Sector

- The transportation sector remains the largest source of GHG emissions in the City of Chico, it also experienced the most significant decline: 32%. Direct emissions from ground transportation (cars, trucks) as measured by sales of gasoline and diesel fuels represented 65% of GHG emissions in the Climate Action Plan baseline year (2005). The most recent data (2017) indicate that GHGs from the transportation sector are now 58% of total emissions.
- Emissions from the energy sector were 31% of GHG emissions in 2005. That figure is now 38% of the 2017 GHG inventory.
- The other source of GHGs tracked by the City is the Solid Waste sector. In the 2005 baseline year, solid waste accounted for 4% of GHGs. Solid Waste in 2017 was estimated to contribute 5% to GHG emissions.
- The Transportation sector showed significant declines. Energy use from electricity actually increased, but GHG emissions were lower due to greater

use of renewables in the electricity mix. GHGs from solid waste decreased slightly from 2005 levels.

Transportation Sector

- Emissions from transportation sources, as measured by total sales of gasoline and diesel in the City, showed a significant decline from 2005 levels. Gasoline sales declined from 30, 167,879 gallons to 20,597,450 gallons. This represents a 32% decline. Diesel sales decline from 15.6 million gallons to just under 10 Million gallons, a 36% decline. The factors responsible for this decline are not known. Our best "hunch" is that this represents an increase in the overall fuel efficiency of the stock of cars and trucks on the road, including a contribution from the growing number of electric vehicles registered in the City,

Electric Power

- GHG emissions from this sector declined by a modest 8% in 2017 compared to 2005. Since overall consumption of electricity is up 6.5%, the reduction in GHG is due entirely to the decrease in carbon intensity of California's electricity generation. This is driven by the large increase in renewable energy resources mandated by California's Renewable Portfolio Standard and the Cap-and-Trade Program. The GHG intensity of imported electricity has been declining steadily over time as California imports a greater share of renewable power and divests from long-term coal-fired electricity contracts (California Air Resources Board 2018). Overall Commercial electricity consumption is down about 2%. Residential use is up a whopping 16%. This calls attention to the need for increased efforts to reduce home energy use through higher efficiency standards and public education for conservation.

Commercial and Residential Natural Gas Consumption

- Natural gas consumption shows a similar pattern as electricity: a decline in the commercial sector, and an increase in the Residential sector. The decline in the Commercial sector is marked: from slightly more than 8M therms to about 6M therms – a 27% decrease. (see Table 3.) Residential use increased from around 11 M therms to around 12M therms, an increase of about 11%. Overall, GHGs from natural gas declined about 5%.

Recycling and Waste

- Emissions from solid waste are a relatively minor contributor to Chico's GHG emissions. Table 4 shows that tonnage of solid waste sent to the local landill declined from a little more than 88 thousand tons in 2005 to 82.4 thousand tons in 2017. Tonnage actually peaked in 2007 at nearly 95 thousand tons then declined through 2014 (to 69.5 thousand tons). Since 20014, tonnage has increased steadily to the current (2017) level. So, while 2005-2017 saw an overall decline in solid waste tonnage of around 6%, there has been an increase of 18% since the low point in waste tonnage in 2014.

	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
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

Table 1. Gasoline and Diesel Sales and Associated GHG Emissions, City of Chico, 2005-2017
(Source: City of Chico)

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
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

Table 2. Commercial and Residential Electricity Consumption and Associated GHG Emissions, City of Chico, 2005-2017 (Source: City of Chico, PG&E)

	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

Table 3. Commercial and Residential Natural Gas Consumption and Associated GHG Emissions, City of Chico, 2005-2017 (Source: City of Chico)

	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

Table 4. Solid Waste Generated, and Associated GHG Emissions, City of Chico, 2005-2017
(Source: City of Chico)

	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

Note overall decline in tonnage, but a recent trend toward an increase in solid waste from 2014-2017.

CITY OF CHICO MEMORANDUM

TO: City Council DATE: **DRAFT**

FROM: Mark Stemen, STF Chair FILE: STF File

SUBJECT: Sustainability Task Force Update and Proposed Work Plan

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SUMMARY

In November 2012, the City Council adopted a Climate Action Plan (CAP), which identifies actions to be taken by the City and the community to reduce greenhouse gas (GHG) emissions to 25% below 2005 levels by 2020. The City's goal is consistent with State efforts to reduce emissions of greenhouse gases linked to climate change. In 2013, Council appointed a Sustainability Task Force (STF) to function as a "working committee" to lead the City's implementation of the CAP, and directed staff to work with the ad hoc committee as needed.

The CAP is broken up into Phase I and Phase 2 actions. Phase I actions are to be implemented prior to 2015 and are projected to reduce GHG emissions to 10% below 2005 levels, with the remaining 15% of the 25% goal to be achieved in Phase 2 between the years 2016 and 2020. The STF has been meeting regularly over the past five years to review and prioritize CAP actions and other opportunities that might reduce GHG emissions for implementation. A majority of the CAP's actions have been implemented, are underway, or are ongoing.

Last year, the STF conducted a comprehensive review of the CAP to identify any deficiencies, determine if additional measures are needed to meet the City's GHG emissions reduction goal, and to provide recommendations to Council on actions that should be pursued. To support that effort, the STF utilized macro indicators for determining GHG emission trends, including annual data showing annual electricity (kWh) and natural gas (therms) use; fuel (gallons) sales; and waste (tons) generation from the 2005 base year through 2017. A summary of that GHG emission trend analysis is provided as **Attachment A**. The results from the analysis show a decrease in overall GHG emissions of approximately 23% from the baseline year of 2005 to 2017. While there is a promising "macro" trend towards achieving the City's goal to reduce greenhouse gas (GHG) emissions to 25% below 2005 levels by 2020, the attached analysis also shows a number of concerning trends.

In September 2016, California's state legislature passed senate bill (SB) 32 to reauthorize and extend until 2030 the state's economy-wide greenhouse gas (GHG) reduction program. The bill sets a new GHG target of at least 40% below the 1990 level of emissions by 2030. **Therefore, the City's GHG emissions reduction targets are no longer in concert with the State's targets.**

Recommendation:

The Sustainability Task Force recommends that the City Council:

1. Adopt the State of California's new GHG emissions reduction target of 40% below the 1990 level of emissions by 2030;
2. Direct preparation of a new Climate Action Plan (CAP) to achieve the new GHG emissions reduction goal;
3. Transform the STF into a "standing" City Commission with direction to implement the CAP; and
4. Provide staff support for the Commission and towards implementation of the CAP.

FISCAL IMPACT

There will be a cost associated with staff time to support the Commission and implement the Climate Action Plan, however, the cost of not addressing the long-term impacts of climate change are significantly greater.

ACCOMPLISHMENTS

The STF has functioned as a "working" committee for the past five years. Significant coordination with community sustainability partners has taken place. Below are key accomplishments and updates:

- Created the Chico Sustainability Facebook presence, completed a "mobile friendly" transition of the City's Sustainability website, and increased the website's use as an information hub for how residents and businesses can reduce their environmental footprint, save money, and help the City achieve its GHG emissions reduction goal.
- Coordinated with the City's Building Department regarding new building code requirements that might help the City achieve its greenhouse gas emissions reduction goal. The effort resulted in a draft ordinance that would require a homeowner to install basic energy efficiency measures (e.g., ceiling insulation, weather stripping, etc.) throughout the home if a residential remodel exceeded 50% of the existing floor area of the structure. The draft ordinance closely mirrors the City's Residential Energy Conservation Ordinance, which requires similar energy efficiency upgrades at the time of sale of a home. The residential remodel retrofit ordinance was brought to Council for action in 2018, but was not approved. It will be brought forward again in 2019.
- Partnered with the Chamber, Sierra Nevada Brewery, and local businesses to host three Sustainable Business Expo/Happy Hour at the Sierra Nevada Big Room. The Expo engaged and connected area businesses with information (e.g., rebates), inspiration, and motivation to incorporate and expand sustainable business practices.
- In 2017, the STF engaged CivicSpark to develop a community challenge, the Million Watt Challenge ("Challenge"), to foster a positive and healthy change in peoples' behavior,

engage the community in reducing energy use, and educate residents about the benefits of reducing GHG emissions. The Challenge was a partnership between the City, North Valley Energy Watch, Chico Chamber, and the Chico News & Review. Over 1,600,000 watts of old lighting were replaced with LEDs. In addition to direct reductions in energy savings, the effort built engagement in energy conservation and climate action through sustained promotion of and visibility for sustainability in the community. Outreach efforts included tabling the Challenge Booth at over thirty-five local events to promote energy efficiency to thousands of community members, three residential energy efficiency workshops in Chico's older neighborhoods, and prize raffles. The Challenge became a successful community story, and was featured in five local newspaper articles and through weekly social media updates, further elevating awareness and engagement in energy conservation.

- One of the most critical issue facing communities today is planning for the inevitable impacts of climate change. Preparing and planning for natural hazards at the local level is critical, and this couldn't be more important than in California where flooding, wildland fires, and other hazards regularly take center stage. In 2018, in collaboration with Butte County, the STF again collaborated with CivicSpark to develop a Climate Change Vulnerability Assessment (see **Attachment B**). The assessment identifies risks climate change poses to Chico, the geographic areas at risk, and also includes a set of adaptation strategies to avoid or minimize climate change impacts. Per State law, this information will be incorporated into the Safety Element of the City's General Plan.

- The effects of global warming are occurring, so it is imperative that communities pursue adaptation and resiliency planning. The Vulnerability Assessment identified that Chico has experienced a doubling of extreme heat days over the historical average, and they are projected to double again by 2030. Chico is the largest urban center in Butte County, has the largest homeless population, and includes a number of disadvantaged communities that have a higher potential to be impacted by severe heat. This year, the City's CivicSpark Fellow is working with City staff and Butte County Public Health to develop an Extreme Heat Preparedness Plan, including the identification of "cooling centers".

- The STF participated in the BCAG-led development of the Butte Plug-In Electric Vehicle (PEV) Readiness Plan. The Plan identifies future PEV infrastructure for the community, makes the region eligible for grant funding, and helps meet GHG emission reduction targets.

- Met regularly with key sustainability partners to discuss relevant CAP Actions, identify areas of mutual support, and assist the STF in its implementation of the CAP. Partners included: 1) PG&E; 2) Butte County Public Health Department and Enloe Medical Center; 3) Butte County Community Development Department; 4) Butte County Air Quality Management District; 5) CalWater; 6) BCAG; 7) Chico Velo, Butte Bike Coalition, and Chico's Traffic Division; 8) CSU, Chico, Butte College, and CUSD; 9) Chico Tree Advocates and Chico's Urban Forester; 10) Recology, Waste Management, and City and County solid waste representatives; and 11) North Valley Energy Watch and GRID Alternatives.

Proposed 2019 Meeting Schedule

The STF plans to meet eight (8) times in 2019:

Thursday, January 10th @ 5:30pm in CR 1

Thursday, February 28th @ 5:30pm in CR 1

Thursday, April 11th @ 5:30pm in CR 1

Thursday, May 23rd @ 5:30pm in CR 1

Thursday, July 11th @ 5:30pm in CR 1

Thursday, August 22nd @ 5:30pm in CR 1

Thursday, October 10th @ 5:30pm in CR 1

Thursday, December 12th @ 5:30pm in CR 1

cc: CM, ACM, L. Herman, STF, Chamber of Commerce, BEC

Governor Brown Establishes Most Ambitious Greenhouse Gas Reduction Target in North America

Published: Apr 29, 2015

New California Goal Aims to Reduce Emissions 40 Percent Below 1990 Levels by 2030

SACRAMENTO – Governor Edmund G. Brown Jr. today issued an executive order to establish a California greenhouse gas reduction target of 40 percent below 1990 levels by 2030 – the most aggressive benchmark enacted by any government in North America to reduce dangerous carbon emissions over the next decade and a half.

"With this order, California sets a very high bar for itself and other states and nations, but it's one that must be reached – for this generation and generations to come," said Governor Brown.

This executive action sets the stage for the important work being done on climate change by the Legislature.

The Governor's executive order aligns California's greenhouse gas reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris later this year. The 28-nation European Union, for instance, set the same target for 2030 just last October.

California is on track to meet or exceed the current target of reducing greenhouse gas emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32). California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent under 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius – the warming threshold at which scientists say there will likely be major climate disruptions such as super droughts and rising sea levels.

World Leaders React

United Nations Framework Convention on Climate Change Executive Secretary Christiana Figueres: "California and Governor Brown have clearly understood, internalised and articulated the science of climate change and today have aligned the state to the growing global understanding of the step changes and strategies needed over the coming years and decades. Resolving climate change requires a swift peaking of emissions and a deep decarbonisation of the global economy by the second half of the century. California's announcement is a realisation and a determination that will gladly resonate with other inspiring actions within the United States and around the globe. It is yet another reason for optimism in advance of the UN climate conference in Paris in December."

World Bank Group President Jim Yong Kim: "Four consecutive years of exceptional drought has brought home the harsh reality of rising global temperatures to the communities and businesses of California. There can be no substitute for aggressive national targets to reduce harmful greenhouse emissions, but the decision today by Governor Brown to set a 40 percent reduction target for 2030 is an example of climate leadership that others must follow."

Premier of Ontario, Canada Kathleen Wynne: "I applaud Governor Brown's continued leadership on climate change. This shows the important role that sub-national governments can play in shaping a strong global agreement on climate change later this year in Paris."

Former New York Mayor Michael Bloomberg: "California's 2030 goal to reduce carbon emissions is not only bold, it's necessary – for the economy and our future."

NextGen Climate Founder Tom Steyer: "When it comes to climate change, California has emerged as a global leader – proving that we don't have to choose between a healthy environment and a strong economy. Today Governor Brown took that leadership to the next level. By setting an ambitious and achievable target to reduce emissions of climate-altering pollutants 40 percent by 2030, Governor Brown is setting a course that will build upon the hundreds of thousands of good paying advanced energy jobs in California, improve the health and wellbeing of Californians and continue our global leadership to solve the greatest challenge of our generation."

Princeton University Professor Michael Oppenheimer: "Governor Brown's ground-breaking commitment not only shows that solving the climate problem goes hand-in-hand with economic growth and technology leadership, but points the way toward a climate solution for other states and the world."

Climate Adaptation

The executive order also specifically addresses the need for climate adaptation and directs state government to:

– Incorporate climate change impacts into the state's Five-Year Infrastructure Plan;
– Update the Safeguarding California Plan – the state climate adaption strategy – to identify how climate change will affect California infrastructure and industry and what actions the state can take to reduce the risks posed by climate change;
– Factor climate change into state agencies' planning and investment decisions; and
– Implement measures under existing agency and departmental authority to reduce greenhouse gas emissions.

California's Response to Climate Change

In his inaugural address earlier this year, Governor Brown announced that within the next 15 years, California will increase from one-third to 50 percent our electricity derived from renewable sources; reduce today's petroleum use in cars and trucks by up to 50 percent; double the efficiency savings from existing buildings and make heating fuels cleaner; reduce the release of methane, black carbon and other potent pollutants across industries; and manage farm and rangelands, forests and wetlands so they can store carbon.

Since taking office, Governor Brown has signed accords to fight climate change with leaders from Mexico, China, Canada, Japan, Israel and Peru. The Governor also issued a groundbreaking call to action with hundreds of world-renowned researchers and scientists – called the consensus statement – which translates key scientific climate findings from disparate fields into one unified document. The impacts of climate change are already being felt in California and will disproportionately impact the state's most vulnerable populations.

The text of the executive order is below:

EXECUTIVE ORDER B-30-15

WHEREAS climate change poses an ever-growing threat to the well-being, public health, natural resources, economy, and the environment of California, including loss of snowpack, drought, sea level rise, more frequent and intense wildfires, heat waves, more severe smog, and harm to natural and working lands, and these effects are already being felt in the state; and

WHEREAS the Intergovernmental Panel on Climate Change concluded in its Fifth Assessment Report, issued in 2014, that "warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia" and that "continued emission of greenhouse gases will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive and irreversible impacts for people and ecosystems;" and

WHEREAS projections of climate change show that, even under the best-case scenario for global emission reductions, additional climate change impacts are inevitable, and these impacts pose tremendous risks to the state's people, agriculture, economy, infrastructure and the environment; and

WHEREAS climate change will disproportionately affect the state's most vulnerable citizens; and

WHEREAS building on decades of successful actions to reduce pollution and increase energy efficiency the California Global Warming Solutions Act of 2006 placed California at the forefront of global and national efforts to reduce the threat of climate change; and

WHEREAS the Intergovernmental Panel on Climate Change has identified limiting global warming to 2 degrees Celsius or less by 2050 as necessary to avoid potentially catastrophic climate change impacts, and remaining below this threshold requires accelerated reductions of greenhouse gas emissions; and

WHEREAS California has established greenhouse gas emission reduction targets to reduce greenhouse gas emissions to 1990 levels by 2020 and further reduce such emissions to 80 percent below 1990 levels by 2050; and

WHEREAS setting an interim target of emission reductions for 2030 is necessary to guide regulatory policy and investments in California in the midterm, and put California on the most cost-effective path for long term emission reductions; and

WHEREAS all agencies with jurisdiction over sources of greenhouse gas emissions will need to continue to develop and implement emissions reduction programs to reach the state's 2050 target and attain a level of emissions necessary to avoid dangerous climate change; and

WHEREAS taking climate change into account in planning and decision making will help the state make more informed decisions and avoid high costs in the future.

NOW, THEREFORE, I, EDMUND G. BROWN JR., Governor of the State of California, in accordance with the authority vested in me by the Constitution and statutes of the State of California, in particular Government Code sections 8567 and 8571 of the California Government Code, do hereby issue this Executive Order, effective immediately

IT IS HEREBY ORDERED THAT:

1. A new interim statewide greenhouse gas emission reduction target to reduce greenhouse gas emissions to 40 percent below 1990 levels by 2030 is established in order to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050.

2. All state agencies with jurisdiction over sources of greenhouse gas emissions shall implement measures, pursuant to statutory authority, to achieve reductions of greenhouse gas emissions to meet the 2030 and 2050 greenhouse gas emissions reductions targets.

3. The California Air Resources Board shall update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent.

4. The California Natural Resources Agency shall update every three years the state's climate adaptation strategy, Safeguarding California, and ensure that its provisions are fully implemented. The Safeguarding California plan will:
-Identify vulnerabilities to climate change by sector and regions, including, at a minimum, the following sectors: water, energy, transportation, public health, agriculture, emergency services, forestry, biodiversity and habitat, and ocean and coastal resources;
-Outline primary risks to residents, property, communities and natural systems from these vulnerabilities, and identify priority actions needed to reduce these risks; and
-Identify a lead agency or group of agencies to lead adaptation efforts in each sector.

5. Each sector lead will be responsible to:
-Prepare an implementation plan by September 2015 to outline the actions that will be taken as identified in Safeguarding California, and
-Report back to the California Natural Resources Agency by June 2016 on actions taken.

6. State agencies shall take climate change into account in their planning and investment decisions, and employ full life-cycle cost accounting to evaluate and compare infrastructure investments and alternatives.

7. State agencies' planning and investment shall be guided by the following principles
-Priority should be given to actions that both build climate preparedness and reduce greenhouse gas emissions;
-Where possible, flexible and adaptive approaches should be taken to prepare for uncertain climate impacts;
-Actions should protect the state's most vulnerable populations; and
-Natural infrastructure solutions should be prioritized.

8. The state's Five-Year Infrastructure Plan will take current and future climate change impacts into account in all infrastructure projects

9. The Governor's Office of Planning and Research will establish a technical, advisory group to help state agencies incorporate climate change impacts into planning and investment decisions.

10. The state will continue its rigorous climate change research program focused on understanding the impacts of climate change and how best to prepare and adapt to such impacts.

This Executive Order is not intended to create, and does not, create any rights or benefits, whether substantive or procedural, enforceable at law or in equity, against the State of California, its agencies, departments, entities, officers, employees, or any other person.

I FURTHER DIRECT that as soon as hereafter possible, this Order be filed in the Office of the Secretary of State and that widespread publicity and notice be given to this Order.

IN WITNESS WHEREOF I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 29th day of April 2015.

_____
EDMUND G. BROWN JR.
Governor of California

ATTEST:

_____
ALEX PADILLA
Secretary of State

CALIFORNIA'S 2030 CLIMATE COMMITMENT

RENEWABLE RESOURCES FOR HALF OF THE STATE'S ELECTRICITY BY 2030

To meet our climate change goals, we must derive 50 percent of the state's electricity from renewable resources by 2030. We are already well on our way as the state currently uses renewable resources for about 25 percent of its electricity use and is on a trajectory to use 33 percent by 2020. California is a leader in reducing greenhouse gases from electricity generation while maintaining an affordable and reliable electricity system.

BENEFITS FROM RENEWABLES FOR HALF OF ELECTRICITY USE BY 2030

Renewables have created thousands of jobs, reduced harmful air pollutants, lowered carbon pollution, and led to greater diversity and resilience in our energy supply.

Meet Climate Change Goals and Health Standards

» Increasing renewable resources to 50 percent of the state's electricity consumption by 2030 sets California on path to meet its 2050 climate change goals

» Using renewable resources could help reduce emissions from the transportation sector as increasing numbers of Californians drive electric vehicles, as well as from electricity use in the residential, commercial, and industrial sectors

HOW WE GET THERE

Already on Our Way

» Existing policies will increase renewable-based electricity use to 33 percent by 2020

» California has more than doubled renewable capacity installed in the last four years (adding over 11,000 megawatts) and has more than 21,000 megawatts online, which includes 2,300 megawatts on 245,000 homes, businesses, and schools. The graph shows renewable energy procured for California from 1983–2013 by resource type and the steep increase in recent years.

» Another 11,400 MW of renewable energy projects in California have received environmental permits for development

» Recent costs for renewables – even without subsidies – are approaching levels competitive with new natural gas plants

» California has achieved this level of renewable development and maintained the reliability of the electricity grid by developing the capability to integrate the current levels of weather-dependent generation (wind and solar). Moving to 50 percent renewable energy could make balancing electricity demand and generation increasingly challenging at some times during the day and year. Therefore, additional tools will be needed to maintain reliability including: charging zero emission vehicles at times of high renewable production, balancing supply and demand over broad geographic areas by multistate agreements (such as the Energy Imbalance Market), increasing flexibility in the generating fleet, deploying emerging storage technologies and programs that reward customers for shifting demand, and building a smarter grid.

Build on California's Climate Change Framework

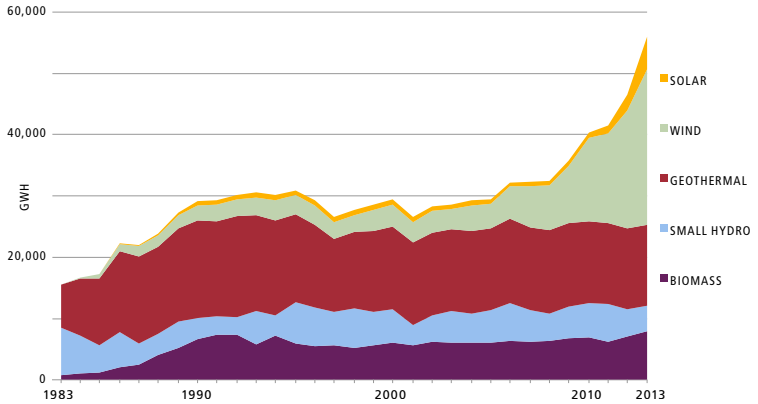
A 50 percent renewables target can be reached in several ways, including:

» A new utility procurement requirement that focuses on optimizing clean energy technologies, efficiency, and demand management programs according to costs and system benefits.

» A new procurement requirement to increase renewables beyond 33 percent, including allowing for rooftop solar and better coordination with Western states and Baja California to maximize renewable energy production and better balance production with demand.

» A clean energy standard requiring reductions in greenhouse gas emissions of electricity sold in California based upon the loading order.

CALIFORNIA RENEWABLE ENERGY GENERATION BY RESOURCE TYPE (IN-STATE AND OUT-OF-STATE)



STATE OF CALIFORNIA ENERGY COMMISSION

CALIFORNIA'S 2030 CLIMATE COMMITMENT

DOUBLE ENERGY SAVINGS IN EXISTING BUILDINGS & DEVELOP CLEANER HEATING FUELS BY 2030

To achieve our climate change goals over the next 15 years, we must double the planned level of savings from energy efficiency improvements in existing buildings, and develop cleaner heating fuels. Current policies and actions have improved energy service reliability and saved Californians money on their energy bills. Building on and expanding these efforts, we can meet carbon targets, maintain energy service affordability, upgrade our homes and businesses, and transition to cleaner heating fuels.

BENEFITS

Energy Cost Reductions and Improved Comfort

» Efficient buildings are affordable to operate, quiet, comfortable, safe, highly functional, and more valuable.

Meet Air Quality and Climate Change Goals

» Reducing energy use helps minimize the need to generate electricity from fossil fuel-fired power plants, avoiding associated air pollution and greenhouse gas emissions.

» Cleaner heating fuels such as low-carbon gases and electricity from renewable resources can reduce local air pollution.

Enhance Energy Service Reliability

» Energy efficiency strengthens reliability by diversifying the mix of resources to meet our energy needs.

» Energy efficiency reduces the burden on the electric system, improving its operations and flexibility.

HOW WE GET THERE

Already on Our Way

» Building and Appliance Energy Efficiency Standards, put in place over the last four decades, are saving Californians billions of dollars every year in avoided energy costs.

» California ratepayers have invested consistently in energy efficiency programs. These programs provided over $2 billion in net benefits over the past 9 years.

» California's energy efficiency research and development investments are fostering new technologies and ideas to further improve energy performance of existing buildings and advance cleaner heating technologies.

Building on California's Climate Change & Energy Policy Framework

» **Government Leadership**. Achieve dramatically greater performance levels in publicly-owned buildings; push rigorous code compliance; streamline permitting systems and use data to drive community energy planning.

» **Simpler Access to Useful Information**. Knowledge drives modern markets. Building benchmarking and other energy assessments provide targeted knowledge to enable and motivate efficiency improvements. Straightforward access to relevant data is needed to target the best opportunities.

» **Innovative Business Solutions**. Enable widespread delivery of dependable savings from routine upgrade projects.

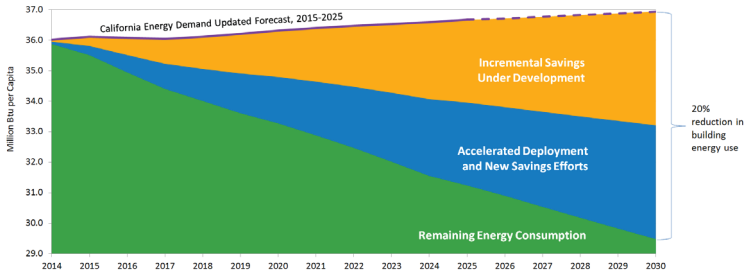
» **Financing**. Pervasive access to affordable, innovative financing that matches payments to savings timeframes.

» **Utility Procurement**. Treat efficiency as a clean distributed energy resource for which utilities contract in a fashion analogous to large-scale generation.

» **Technical Innovation**. Increased development and commercialization of promising technologies and practices for lighting, cooling, space and water heating, and plug-loads.

» **Workforce Training**. Bolster the workforce through training in energy efficiency assessment, installation and sales.

Reduction in Building Energy Consumption Per Capita



STATE OF CALIFORNIA
ENERGY COMMISSION

CALIFORNIA'S 2030 CLIMATE COMMITMENTS

Cutting Petroleum Use in Half by 2030

In order to meet federal health-based air quality standards and our climate change goals, we must cut in half the amount of petroleum we use in our cars and trucks over the next 15 years. We are already on our way, and building on current policies and trends that are providing Californians with more mobility options, more efficient vehicles, and a diverse set of cleaner fuels – we can meet this target, strengthen and grow our economy, and improve public health in our communities.

Benefits from Cutting Petroleum Use in Half by 2030

Less Pollution

- In California, the production, refining, and use of petroleum accounts for almost half of greenhouse gas emissions, 80 percent of smog-forming pollution, and over 95 percent of cancer-causing diesel particulate matter

Stronger Economy

- Oil dependence costs the U.S. an estimated $300-500 billion annually ($33-55 billion in California)
- Reducing energy use and improving vehicle efficiency cuts costs and improves economic productivity and competitiveness
- A diverse mix of domestic and local fuel supplies stabilizes energy prices, improves economic resilience, and creates new investments, businesses, and jobs

Meet Health Standards and Climate Change Goals

- Studies show 45-55% petroleum reduction in 2030 sets California on path to meet its 2050 climate change goals
- Meeting federal health-based air quality standards likely requires additional petroleum reductions

How we get there

Already on Our Way

- Existing policies will reduce petroleum use in cars and trucks by more than 20% in 2030
- Planned activities over next two years can achieve significant additional petroleum reductions

Build on California's Climate Change and Air Quality Framework

- Building on existing efforts, California can cut petroleum use from cars and trucks in half by 2030:
  - Build high-speed rail and continue supporting community planning to reduce vehicle miles travelled
  - Continue current levels of light-duty and heavy-duty vehicle efficiency improvements
  - Strengthen the Low Carbon Fuel Standard to continue reducing fuel carbon intensity
  - Continue providing strong market support for zero emission vehicles and renewable fuel production through carbon pricing and other incentives

Sample path to 50% petroleum reduction in 2030

An approach to 50 percent petroleum reduction could include: Reducing growth in vehicle-miles travelled to 4%; increasing on-road fuel efficiency of cars to 35 mpg and heavy-duty trucks to about 7 mpg; and at least doubling use of alternative fuels like biofuels, electricity, hydrogen, and renewable natural gas. (ARB analysis) See graph at right.