City Exercise

Purpose of this exercise: To gain hands on experience with the GHG reduction measure and emissions tracking toolkit.

Directions: Complete each task below to the best of your ability.

Introduction and Background
Brian provides a 10-minute overview

Set-up modules
Brian provides a 10-minute overview

Round 1: Target Selection and Reduction Measure Selection Modules
Brian provides a 5-minute overview
Participants work for 20 minutes on the following tasks

Task	Note interesting things that came up and/or problems you ran into
On the *Target-Selection* tab: 1. Check the "Option 1" checkbox 2. Enter 15% for 2020, 40% for 2030, and 60% for 2040 3. How did your citywide reduction target change? How did your required reductions change? 4. Check the "Option 2" checkbox	

5. Enter "per-SP" in the metric selection box; enter 4.0 for 2020, 2.6 for 2030, and 0.6 for 2040 6. How did your citywide reduction target change? How did your required reductions change?	
On the **MeasureSelection-EE** tab, for measure *EE1: Improve Efficiency of Existing Buildings* performance goal selections: 1. You plan to retrofit 2,000 Single-Family homes by 2020, 5,000 by 2030, and 6,000 by 2040. Complete the performance goal cells to reflect this. 2. You plan to retrofit 3,000 Multi-Family homes by 2020, 5,000 by 2030, and 7,000 by 2040. Complete the performance goal cells to reflect this. 3. You plan to retrofit 500,000 square feet of nonresidential buildings by 2020, 1,500,000 square feet by 2030, and 3,000,000 square feet by 2040. Complete the performance goal cells to reflect this.	
On the **MeasureSelection-EE** tab, for measure *EE3: Improve Efficiency of Municipal Operations and Public Infrastructure,* complete the performance goal cells to reflect the following information. 1. Your Municipal Facilities Master Plan calls for the construction of a new police department building (30,000 square feet), a second public library (70,000 square feet) by 2018. By 2028, the plan calls for a new city hall (150,000 square feet), a new public health building (25,000 square feet), and new city administrative building (175,000 square feet). 2. Your building energy plan requires the new police department building and public library to by 20% below T24 standards. It also requires the City Hall, public health building, and city administrative building to be 25% below T24 standards. 3. Your building management plan involves the retrofit of your community center (50,000 square feet) in 2018 and the existing library (35,000 square feet) in 2019. It also includes the retrofit of your planning department (30,000 square feet) and fire department (20,000 square feet) in 2022, the existing city hall (75,000 square feet) in 2023, and miscellaneous city offices (200,000 square feet) in 2026. These retrofits all aim to reduce electricity consumption by 30% and natural gas consumption by 40%. 4. Your public works plan aims to replace 2,000 HPS streetlights with LED streetlights by 2019 and an additional 5,000 streetlights by 2025.	

5. The plan will also replace 750 incandescent traffic signals with LED traffic signals by 2020 and an additional 1,500 by 2026.	
On the **MeasureSelection-RE** tab, for measure *RE2: Promote and maximize utility clean energy offerings,* complete the performance goal cells to reflect the following information. 1. Starting at the end of 2018, you will offer three renewable electricity program options through your CCA. The options will supply 50%, 75%, and 100% renewable electricity to participants. 2. Your city will have approximately 6,000 single-family homes and 8,000 multi-family homes in 2020. By 2020, your CCA plan aims to enroll approximately 10% of single-family and 5% of multi-family homes in energy option 1, 15% of single-family and 10% of multi-family homes in energy option 2, and 25% of single-family and 15% of multi-family homes in energy option 3. 3. By 2030, your CCA plan aims to enroll approximately twice as many single-family homes and three times as many multi-family homes as were enrolled in 2020. 4. Your CCA will also serve nonresidential customers. By 2020, the CCA plan intends to supply 5%, 15%, and 20% of nonresidential electricity needs through program options #1, #2, and #3, respectively. By 2030, the plan aims to supply 10%, 20%, and 60% of nonresidential electricity needs by program options #1, #2, and #3, respectively.	
On the **MeasureSelection-TR** tab, for measure *TR6: Support Transportation Demand Management,* complete the performance goal cells to reflect the following information. 1. In 2013 you initiated a Commute Trip Reduction Program. Your planning department projects about 20,000 employees in your city by 2020 and an additional 1,500 employees by 2030. The program applied to 40% of citywide employees initially, and will be expanded in 2024 to apply to 85% of citywide employees. 2. You also initiated a Employee Parking "Cash-Out" Program in 2015. At inception, 25% of citywide employees were eligible. By 2019, 50% of citywide employees will be eligible; by 2026, 90% of citywide employees will be eligible. In 2015, the average parking charge was $2.00 per day, but is expected to rise to $3.50 by 2024.	

On the **Tracking-WA** tab, for Measure *WA2 - Promote Water Recycling and Greywater Use*, enter relevant information from the following program data into the appropriate cells. 1. Your total citywide water consumption in 2010 was approximately 4,300 million gallons, and about 7% of that is recycled water. Your regional water agency forecasts 5,100 million gallons consumed by 2020 and 5,250 by 2030. 2. In 2016, a new regional water recycling plant was built, which supplied your city with an additional 400 million gallons of recycled water per year. In 2024, this plant will be expanded to double the amount of recycled water produced. 3. In 2011, you implemented a greywater use program; in the opening year, 200 million gallons of greywater was generated and used within the city. In 2022, the program will be expanded to generate an <u>additional</u> 150 million gallons of greywater; a second expansion of the program is planned in 2028 to generate an <u>additional</u> 300 million gallons of greywater.	
On the **Target-Selection** tab: 1. Did you meet your 2020 target? If not, what is your GHG reduction gap? 2. Did you meet your 2030 target? If not, what is your GHG reduction gap? 3. What is the lowest GHG emissions per-service population that you can achieve by 2020? By 2030? 4. Check the "Option 1" checkbox 5. What is the maximum percent reduction below 2010 emissions that you can achieve by 2020? By 2030?	

Participants spend 5 minutes filling out notes for each task

Round 2: Reduction Measure Tracking Module

Task	Note interesting things that came up and/or problems you ran into
On the **Tracking-EE** tab, for Measure *EE1: Improve Efficiency of Existing Buildings*, enter relevant information from the following program data into the appropriate cells.	

1. From 2012-2014, approximately 200 single-family homes and 300 single-family homes are retrofit <u>each year</u>. From 2015-2017, a <u>total</u> of 1,200 single-family homes and 1,500 multi-family homes are retrofit. 2. For Multi-family homes, the retrofits achieved a 25% electricity savings and 35% natural gas savings from 2012-2014 and a 30% electricity savings and 40% natural gas savings from 2015-2017. 3. From 2011-2013, a total of 225,000 square feet of nonresidential buildings are retrofit <u>each year</u>. From 2014-2017, an additional 350,000 <u>total</u> square feet of nonresidential buildings are retrofit. 4. How are you trending toward your 2020 measure performance goals for residential retrofits? For nonresidential retrofits?	
On the **Tracking-EE** tab, for Measure *EE3 - Improve Efficiency of Municipal Operations and Public Infrastructure:* 1. Your new police department building is constructed in 2017 and the new library is constructed in 2018 (see Round 1 above). Both buildings are built to be 25% more efficient than Title 24 standards. 2. Your community center is retrofit in 2018 and the existing library is retrofit ahead of schedule in 2017 (see Round 1 above). These retrofits reduce electricity consumption by 20% and natural gas consumption by 30% in both buildings. 3. From 2012-2016, 1,000 <u>total</u> HPS streetlights are replaced with LED streetlights; in 2017 and 2018, an additional 400 HPS streetlights are replaced with LED streetlights <u>each year</u>. 4. From 2011-2014, 100 incandescent traffic signals are replaced with LED traffic signals <u>each year</u>; from 2015-2018, an additional 300 <u>total</u> incandescent traffic signals are replaced with LED traffic signals <u>each year</u>. 5. How are you trending toward your 2020 measure performance goals for new municipal buildings? For municipal building retrofits? For streetlights and traffic signals?	
On the **Tracking-RE** tab, for Measure *RE2 - Promote and maximize CCE and utility clean energy offering*, enter relevant information from the following program data into the appropriate cells. 1. Starting in 2012, your city offers 3 program options: a 50% renewable option, a 75% renewable option, and a 100% renewable option.	

2. For <u>each year</u> from 2012-2015, there are 50, 100, and 150 <u>new</u> Single-Family enrollments in program options 1, 2, and 3, respectively. For <u>each year</u> from 2016-2018, there are 100, 150, and 200 <u>new</u> Single-Family enrollments in program options 1, 2, and 3, respectively. 3. For <u>each year</u> from 2012-2015, there are 75, 125, and 200 <u>new</u> Multi-Family enrollments in program options 1, 2, and 3, respectively. For <u>each year</u> from 2016-2018, there are 125, 175, and 250 <u>new</u> Multi -Family enrollments in program options 1, 2, and 3, respectively. 4. Approximately 200 million kWh of electricity is consumed each year by nonresidential customers in your city. For <u>each year</u> from 2012-2014, 8 million kWh, 20 million kWh, and 40 million kWh of electricity is supplied by program options 1, 2, and 3 respectively. For <u>each year</u> from 2015-2018, 10 million kWh, 30 million kWh, and 50 million kWh of electricity is supplied by program options 1, 2, and 3 respectively. 5. How are you trending toward your 2020 measure performance goals for residential electricity? For nonresidential electricity?	
On the **Tracking-TR** tab, for Measure *TR6 - Support Transportation Demand Management*, enter relevant information from the following program data into the appropriate cells. 1. At the initiation of your Commute Trip Reduction Program in 2013, 8,000 employees are eligible. In 2016, the program was updated, and 10,000 employees are now eligible. 2. At the initiation of your Employee Parking "Cash-Out" Program in 2015, 25% of total citywide employees are eligible (see Round 1), and the average daily parking charge is $2.50. In 2017 and 2018, 35% of total citywide employees are now eligible (see Round 1); the average daily parking charge was $3.50 for these years. 3. How are you trending toward your 2020 measure performance goals for the Commute Trip Reduction Program? For the Employee Parking "Cash-Out" Program?	
On the **Tracking-WA** tab, for Measure *WA2 - Promote Water Recycling and Greywater Use*, enter relevant information from the following program data into the appropriate cells.	

1. In 2013, the regional water supply agency supplies your city wsith 8.5% recycled water; this is equivalent to 370 million gallons of recycled water per year.
2. In 2016, a new recycled water plant is built, which supplies your city with 725 million gallons of recycled water per year.
3. In 2011, your city implements a greywater use program; in the opening year, 200 million gallons of greywater is generated and used.
4. From 2013 through 2015, greywater use declines slightly to 100 million gallons per year.
5. However, starting in 2016, the program picks up, and approximately 50 million gallons of additional greywater is generated each year, compared to the previous year.
6. How are you trending toward your 2020 measure performance goals for the recycled water? For greywater?

Summary and Reporting dashboard

Brian provides a 5-minute overview then each group will then share their Summary and Reporting Dashboard