



ClearPath Forecast and Planning Wizard User Guide

October 2022

Forecasting Wizard Introduction:

ICLEI USA is very excited to announce the launch of our new Forecasting and Planning Wizard (Phase 1) update within ClearPath. This is an update we have been working on for quite some time. Within this Wizard, we are eager to showcase the updates that have made the forecasting module easier to utilize to jumpstart using the planning module.

Moving forward within this guide we cover a Step by Step Guide of using the Wizard and provide contacts for additional support.

Thank you!

Forecasting Wizard Step by Step Guide:

1. Start by ensuring you work within either '**Government Track**' or '**Community-Scale track**' whichever houses the inventory you want to use the Wizard on. You are able to use the Wizard in both Government and Community-scale if modeling community-wide and local government operations.
2. Ensure you have had your inventory QAQC'd either internally or by ICLEI before moving forward, as the forecasting module will not live update with changes made in the inventory.
3. We're going to click on '**Start Wizard**' to start the new experience!

Try Our New Forecast And Planning Wizard!

We've designed a new experience to help identify emissions reduction opportunity faster. Try this new experience today.

[Start Wizard >](#)

4. After we click, '**Start Wizard**' we're brought to a screen where you are prompted to name your forecast (suggest naming it something like, **X community- year- BAU forecast**, to identify all key areas of the inventory/ forecast.
 - a. Make sure the inventory selected is the proper inventory you would like to use. If you have multiple inventories within your account they will all be there to choose from.
 - b. Pick an end year for your forecast- ICLEI recommends 2030 and/or 2050.
5. Now you will be prompted to add '**Growth Rates**', select '**+Add New Growth Rate**' where a new window will appear. This will now prompt you to add a name to your growth rate. Within growth rates you have immense possibilities of what you could add here. ICLEI suggests adding a **population growth rate** and **grid decarbonization rate** to start.





- a. When we are adding a new growth rate, you are prompted to pick which type of data you have- this includes; percentage, total population, commercial sq. footage, number of jobs, and other.
 - i. Percentages are entered as annual percentages! For example, if you know that population is growing for your community at 1.3% per year, you would choose the 'Percentage' option and enter 0.013. Then click **'Save'**.
 - ii. When you know the total percentage change over a period, rather than annual percentage change, choose the 'Other' option. For example, let's say you have Xcel as a utility. Xcel plans to decarbonize by 80% by 2030. To model this you would select 'Other' with a starting value as 1 and the ending value as 0.2. Then click **'Save'**.
 - iii. For any of the growth rate entry options, you may enter a growth rate that changes during the forecast period. For example, let's say your community's population is expected to grow at 1.3% per year through 2030, and then 0.8% per year from 2030 to 2050. You would select, 'Percentage', enter an end year of 2030 and value of 0.013. Then click on 'Add End Year Value', and enter 2050 and 0.008. You may do this for as many sub periods as you want.

⇒ **Note:** Many utilities set emissions reduction goals relative to a 2005 or similar baseline. You will want to make sure you are basing growth rates off emissions intensity in your inventory base year.

Example 1: A community's inventory base year is 2019. Their utility has adopted a goal to reduce emissions intensity 80% from 2005 by 2030. The utility also reports that 2019 emissions intensity is 40% below 2005. In this case you would enter a start value of 0.6 (1-40%) and end value in 2030 of 0.2 (1-80%).

Example 2: A community's inventory base year is 2019. Their utility has adopted a goal to reduce emissions intensity 80% from 2005 by 2030. The utility does not report a percentage emissions reduction achieved in 2019, but they do report a 2005 emissions factor of 800 lbs CO2/MWh and a 2019 emissions factor of 600 lbs CO2/MWh. In this case, you will need to calculate the 2019 emissions relative to 2005 ($600/800 = 0.75$). So you would enter a starting value of 0.75 and an end value in 2030 of 0.2.

Sector	Typical Growth Indicator
Residential energy use	Population
Commercial energy use	Population or jobs forecast
Industrial energy use	Assume no change, or use industry specific forecast, or population
Electricity carbon intensity	Consider state emissions or renewable



	generation policies and published utility goals; assume no change if none of those are present.
On-road transportation vehicle miles	Population, or VMT forecast
On-road transportation emissions intensity	Federal CAFE fuel economy standard (default factors pre-loaded in ClearPath)
Other transportation sectors (air travel, rail, off road vehicles)	Population
Solid waste	Population
Water and wastewater	Population
Upstream and fugitive emissions	Population
Agriculture, forest and trees	No change

6. Add additional growth rates to include all you are looking to apply such as; population growth, grid decarbonization, job count, commercial sq, footage etc. Once you've added all the growth rates you would like to include click '**next**'

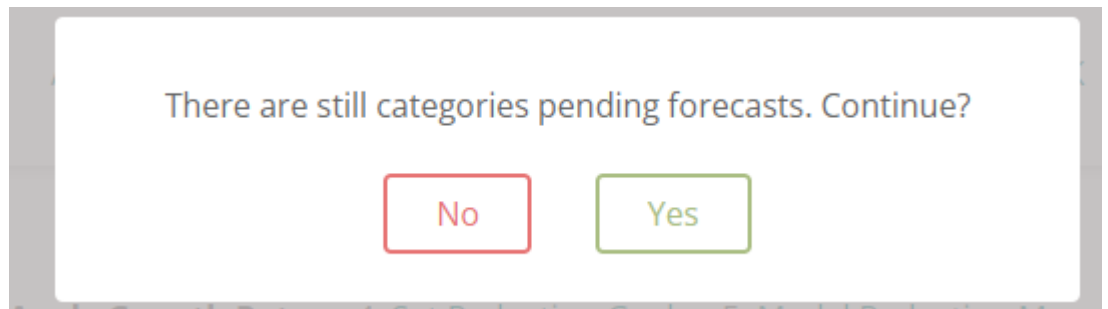
⇒ **Note:** Forecast growth rates for Federal CAFE standards for on road vehicles are preloaded in ClearPath, so you will not need to enter these. You will not see this at the growth rate creation step, but it will be available in the next step.

7. Now we will make forecasts for each of the sectors within your inventory! Each sector that has an incomplete forecast will be marked with an '!'
 - a. To start each sector forecast you will need to name it with an easily identifiable name.
 - b. Make sure '**official**' is clicked. This should be automatically done for you however, just double check. This ensures the forecast is complete and pulled to the planning module.
 - c. Again, you can add notes here to note data gaps, assumptions and/ or sources.
 - d. For the '**Inventory Output**' sections ensure all areas of your inventory have been pulled over. For example, if you entered a natural gas record and electricity record make sure both are present. If one is not, you have the option to add it via the '**select**' option.
 - e. Look at each inventory output and make sure a '**quantity**' and '**CO2e**' are present. If one is missing this means something from the inventory is not pulling over, or quantity may not be filled out in the inventory. To address this you can revisit your inventory and copy the associated value over to the forecast. If there is no quantity in the inventory (for example, if emissions are directly entered), you will need to estimate quantity for the forecast. For



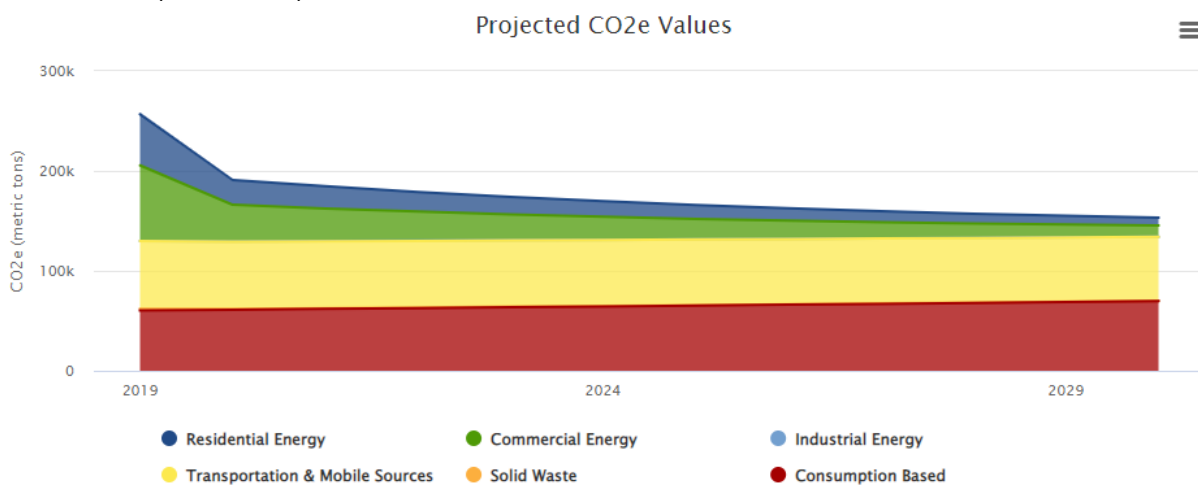
example, if transportation emissions are directly entered in the inventory with no VMT, you could look up an average emissions per mile and use that to estimate VMT. You can then enter the estimated VMT directly into the forecast.

- f. Now that we've made sure all records are present and ready to be forecasted we will apply the appropriate growth rate!
 - i. For the 'Growth Rate' under '**Coefficients**' select the growth rate you wish to apply. Most often, you will select a population growth rate for '**Growth Rate**' and select a grid decarbonization growth rate for '**Carbon Intensity Factor**'
 - g. After you have entered your appropriate growth rates, you can click '**save**'
8. One caveat worth mentioning is that if you click '**Next**' before completing all the forecasts within this area you will receive this message.



- a. Please click '**No**' and proceed to finish the sector forecasts.
9. Within the Transportation sector use '**Default Transportation Carbon Intensity Growth Rates (CAFE)**' as the '**Carbon intensity factor**'.

10. After all forecast sectors have been filled out your forecast will look something like this (see below) and then click '**Next**'.



11. Now you are prompted to enter Reduction Goals. If you have been provided a Science-based Target feel free to enter that value here and/ or if your City has set reduction goals you can enter those here as well. Feel free to enter more than one



goal using the **'+Add New Goal'**. After you enter your reduction goals you can click **'Save Reduction Goals'** and then **'Next'**.

12. Now you are prompted to add reduction strategies. If you have ideas of what you'd like to model here, we encourage you to do so! You can find available calculators by sector. **'Recommended calculators'** will be coming soon! After editing a strategy, be sure to click **'Save.'** If you do not want to add any strategies at this time you can click **'Next'**
13. Now you can name your planning scenario. After you name it, click **'Create Planning Scenario'**
14. Congrats! Now you can see your Business as Usual (BAU) Forecast. In this scenario you are now able to add the reduction strategies you created (if any) and apply those using the **'Add'** and **'Save'** buttons to forecast reductions. You'll need to set the starting and ending year for each reduction measure you add. Many reduction calculators have an input for years to implement - if this is the case, make sure that time period matches the time between start and end years you set in the scenario. Note that ClearPath applies actions inclusive of both start and end years; for example, an action starting in 2023 and ending in 2030 would have implementation time of eight years.

Forecasting Wizard Support:

If you have additional questions please contact your ICLEI Technical Advisor!