

LONG BEACH – GHG INVENTORY DATA EXTRACTION

Climate Action Office, City of Long Beach, CA



CITY OF
LONG BEACH

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Computer Science +
Public Policy

BACKGROUND

The City of Long Beach established the **Climate Action Plan** on August 2022 to tackle climate change.



BACKGROUND

One of the objectives of the CAP is to create a **Greenhouse Gas Emissions Inventory** updated every two years to track the city's CO2 emissions.

PROBLEM STATEMENT

How can the Climate Action Office automate the LB GHG Emissions Inventory creation?

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**Identify Data
Sources**

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**Extract and
Process Data**

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Create Inventory

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**Identify Data
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**Extract and
Process Data**

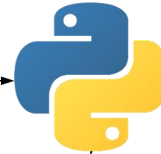


Create Inventory

PROCESS

PROCESS

Publicly available
data



Automatic
extraction and
processing



Long Beach Climate Inventory Data Extraction App

Select to download climate data

Choose type

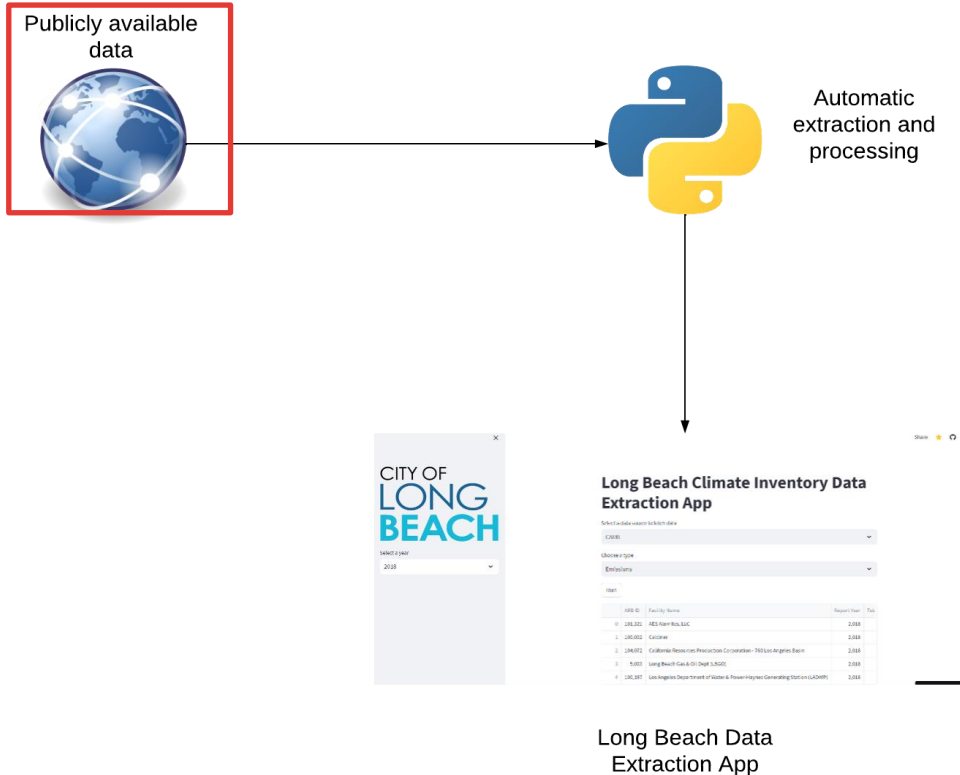
Extraction

Year

ID	Facility Name	Report Year	Year
0	482 Kern Ref, LLC	2008	
1	Caltrans	2008	
2	California Resources Production Corporation - 700 Los Angeles Basin	2008	
3	Long Beach Gas Co (LBCG)	2008	
4	Los Angeles Department of Water & Power (LADWP) Generating Station (LADWP)	2008	

Long Beach Data
Extraction App

PROCESS



PROCESS

Publicly available
data



Automatic
extraction and
processing



Long Beach Climate Inventory Data Extraction App

Select the data source to extract data

Choose type

Enter criteria

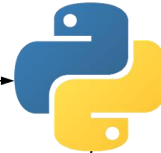
Year

ID	Facility Name	Report Year	Tons
0	482 Kern Reg. LLC	2008	
1	Caltrans	2008	
2	California Resources Production Corporation - TDS Los Angeles Basin	2008	
3	Long Beach Gas & Oil Dept. (LBOG)	2008	
4	Los Angeles Department of Water & Power (LADWP) Generating Station (LADWP)	2008	


Long Beach Data
Extraction App

PROCESS

Publicly available
data



Automatic
extraction and
processing



CITY OF
LONG
BEACH

Long Beach Climate Inventory Data Extraction App

Select to extract which data

Choose type

Enter data

Year

ID	Facility Name	Report Year	Tons
0	482 Kern Reg. LLC	2008	
1	100-000	2008	
2	100-000	2008	
3	100-000	2008	
4	100-000	2008	

Long Beach Data
Extraction App

DEMO

DEMO

×

CITY OF
**LONG
BEACH**

Select a year

2019

Long Beach Climate Inventory Data Extraction App

Select a data source to fetch data

CARB

Choose a type

Emissions

Run

Made with Streamlit



DEMO

CITY OF

All years

2015

2016

2017

2018

2019

2020

2021

All years



Long Beach Climate Inventory Data Extraction App

Select a data source to fetch data

CARB



CARB

EPAFlight

EPAHub

EMFAC

GoogleEIE

USCensus

DEMO

CITY OF LONG BEACH

Select a year

All years

Select a data source to fetch data

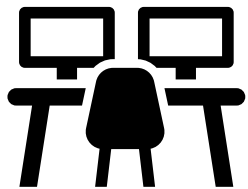
EPAflight

Run

	facility	city	state	metric_tons_CO2
3	Haynes Generating Station [1006097]	LONG BEACH	CA	1,106,104
4	Long Beach Generating Station [1000490]	LONG BEACH	CA	18,400
5	Los Angeles Basin 760 THUMS Long Beach Company [1008409]	Los Angeles	CA	210,888
6	Southeast Resource Recovery Facility (SERRF) [1003340]	LONG BEACH	CA	107,049
7	Thums Long Beach Company [1005066]	Long Beach	CA	---
8	AES Alamitos [1001444]	LONG BEACH	CA	599,959
9	California Resources Production Corporation- LA Basin Gatherin	Long Beach	CA	268,544
10	EDGINGTON OIL COMPANY [1007347]	LONG BEACH	CA	5
11	Gold Bond - LGB Plant [1011213]	Long Beach	CA	25,799
12	Haynes Generating Station [1006097]	LONG BEACH	CA	1,354,789

Download csv file

IMPACT



SAVES HOURS IN
DATA
EXTRACTION



FURTHER
AUTOMATION

CLOSING THOUGHTS

- Unstructured data is challenging to work with but can have great added value
- Further automation is possible, potentially saving several hours of work

Q&A