World Bank and TGO

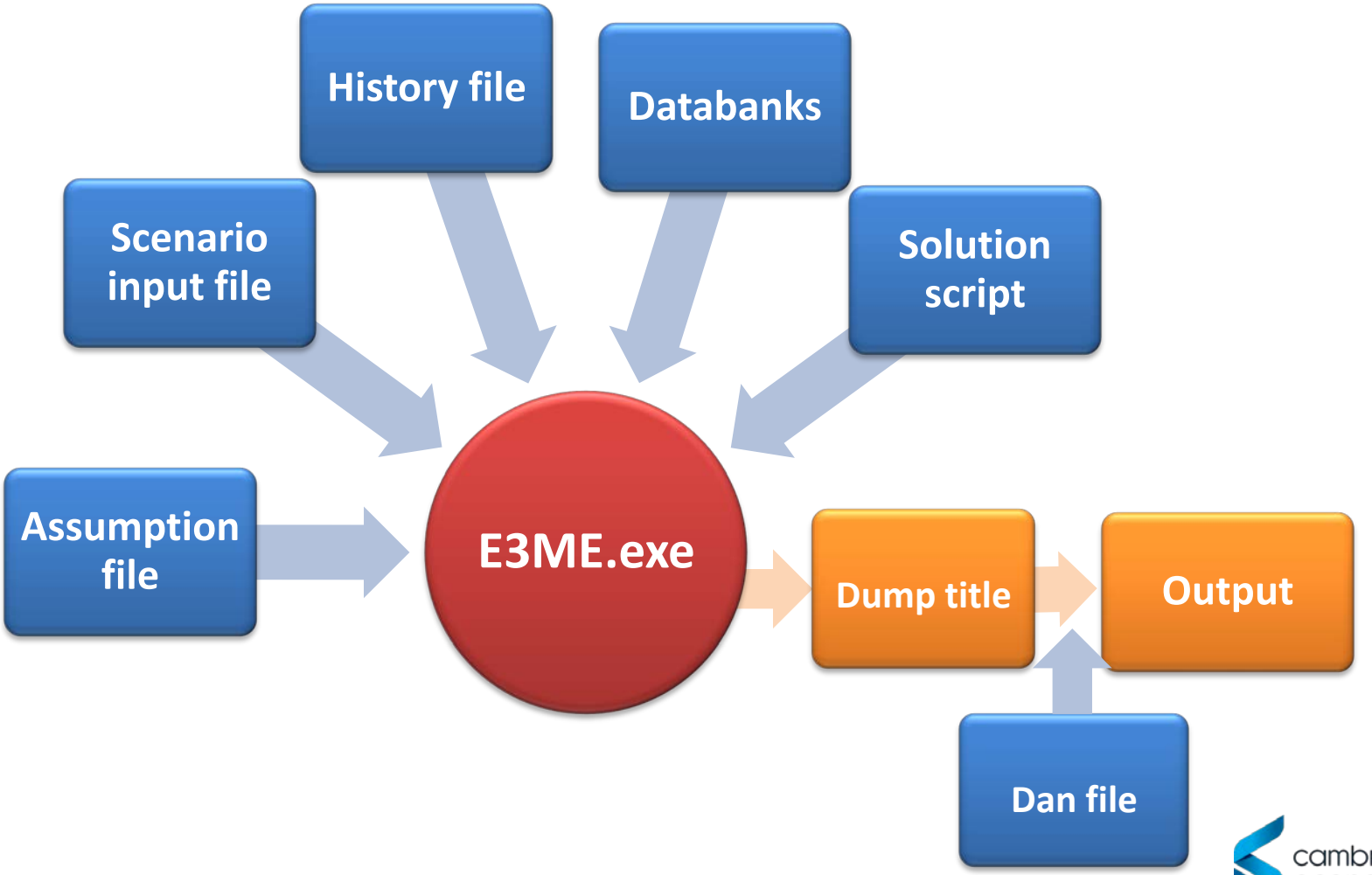
E3-Thailand software and how to run

Project: Impacts of carbon pricing instruments on national economy and contribution to NDC – Thailand

Unnada Chewpreecha and
Sophie Heald

14 February 2019

Overview of the E3-Thailand software



cambridge econometrics

What are the files?

Assumption	• A text file which contains model exogenous assumptions
Scenario	• A text file which contains model policies inputs
History	• A text file which contains commands for reading in data over historical periods, parameters, classifications and switches
Databanks	• Collections of model databanks: historical economic, energy-environment, parameters, forecasts and residuals
Solution Script	• A text file calling model inputs above and the E3-Thailand executable E3ME.exe
E3ME.exe	• An executable, compiled version of the E3-Thailand model codes
Dumptitle	• Model output stored in 'dumptitle' (not human-readable) storage
Dan	• A text file extracts model results from dumptitle and save to text file format

cambridge econometrics

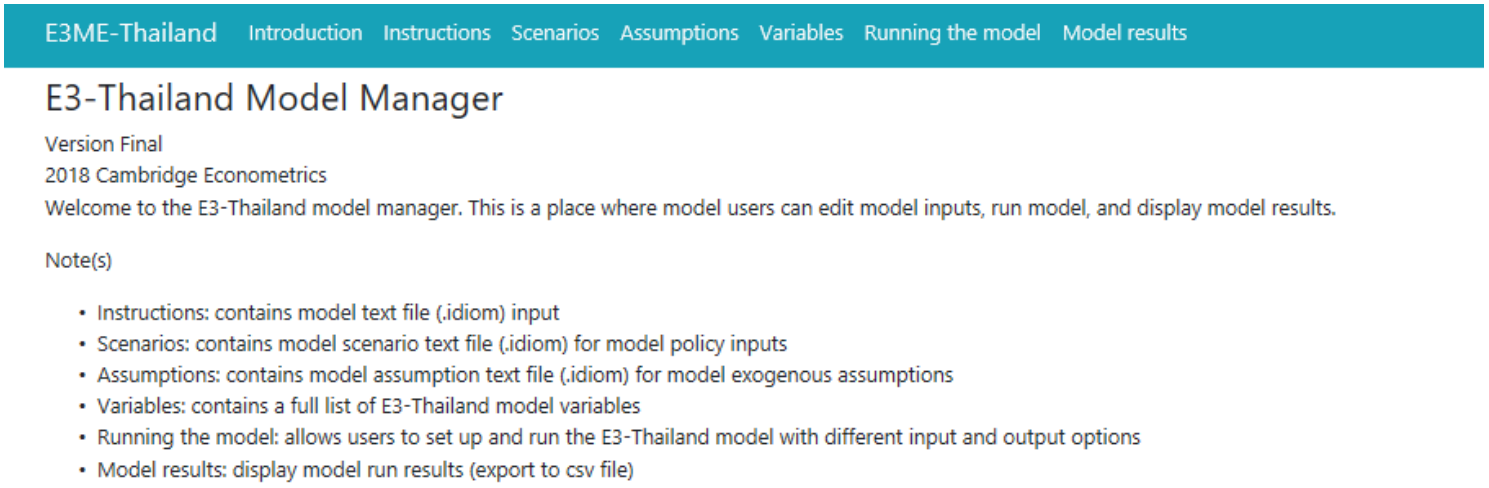
Model manual and download link

https://www.camecon.com/what/our-work/e3-thailand/

cambridge econometrics

The E3-Thailand Manager software

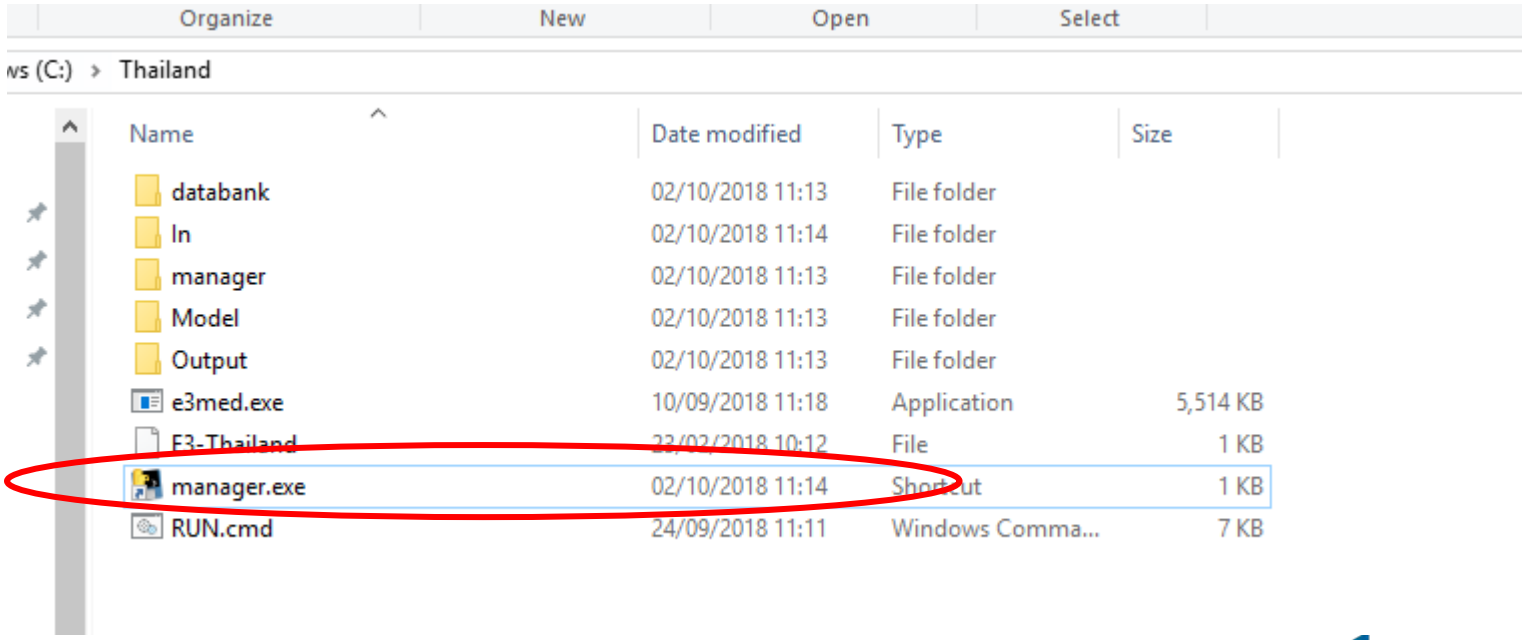
- A user-friendly, simple software where model users can edit model inputs, run model, and display model results
- Open in internet browsers



cambridge econometrics

Step1: Launch the Manager software

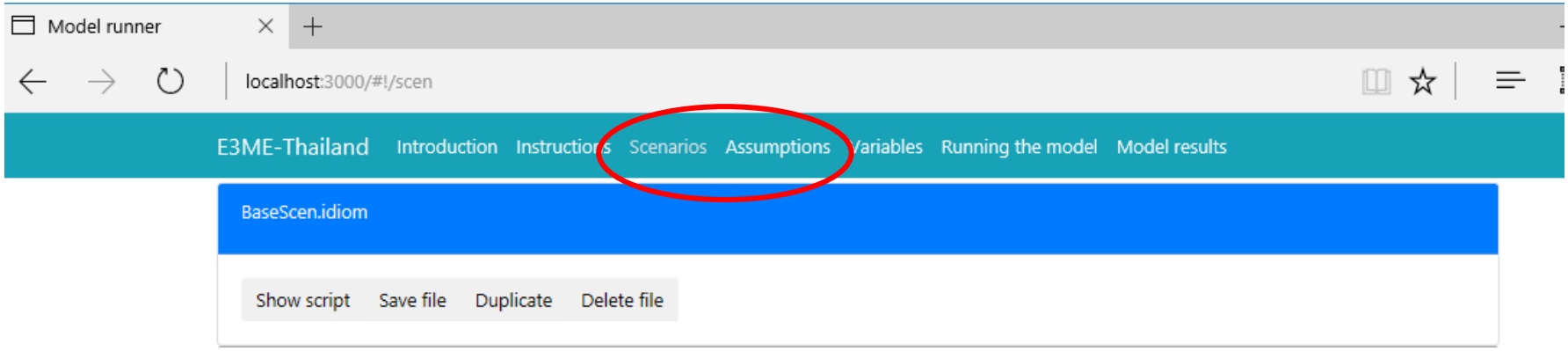
- After downloading launch the Manager software in the model folder
- This will launch the model in your default internet explorer



cambridge econometrics

Step 2: Edit scenario inputs

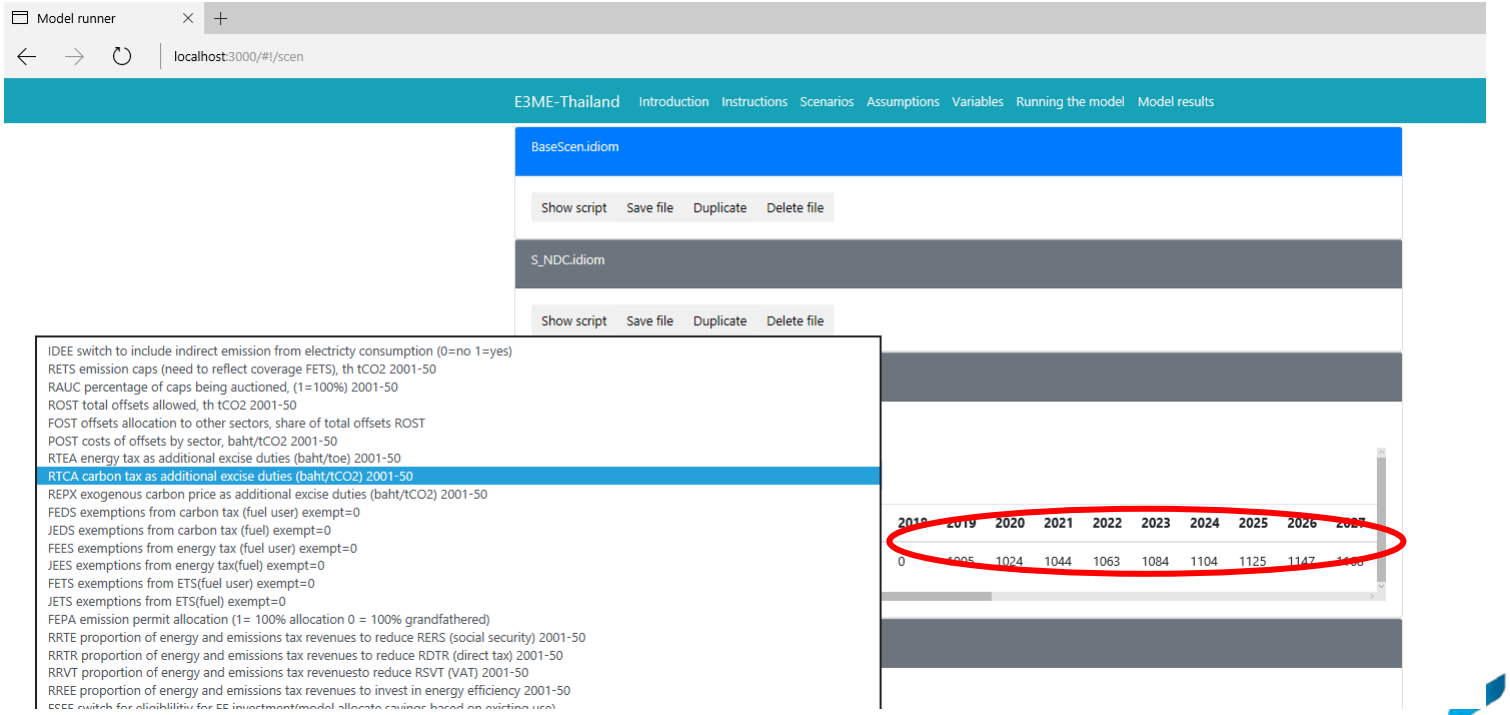
- To edit the scenarios or assumption files select the scenarios or assumptions tab in the model manager



cambridge econometrics

Step 2: Edit scenario inputs (cont)

Here, a scenario is opened and we have entered a carbon tax. This image is an example of how a scenario might be edited in Manager



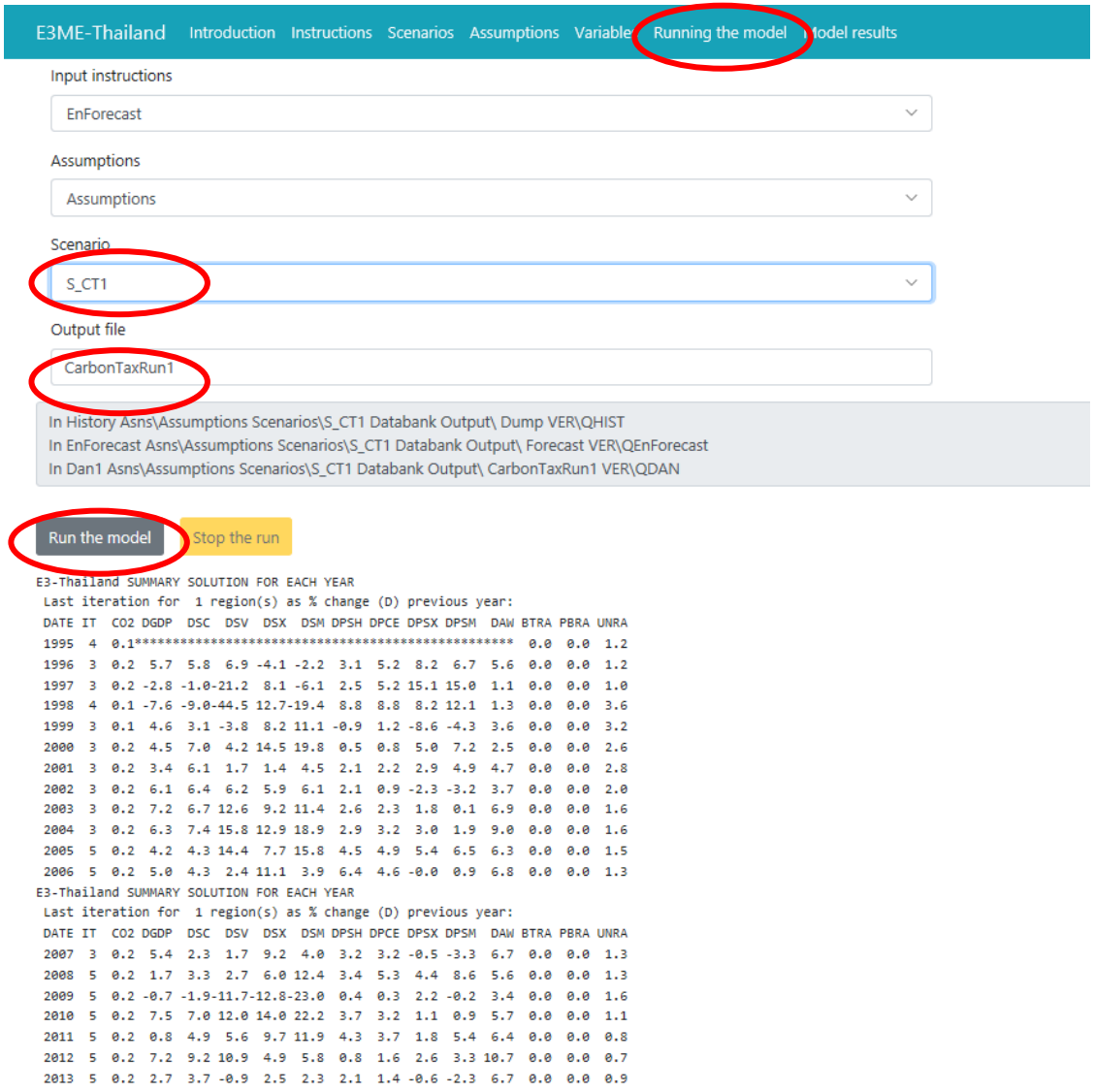
cambridge econometrics

Step 3: Run the model

To run the model select the input file, assumption and scenarios you want to use.

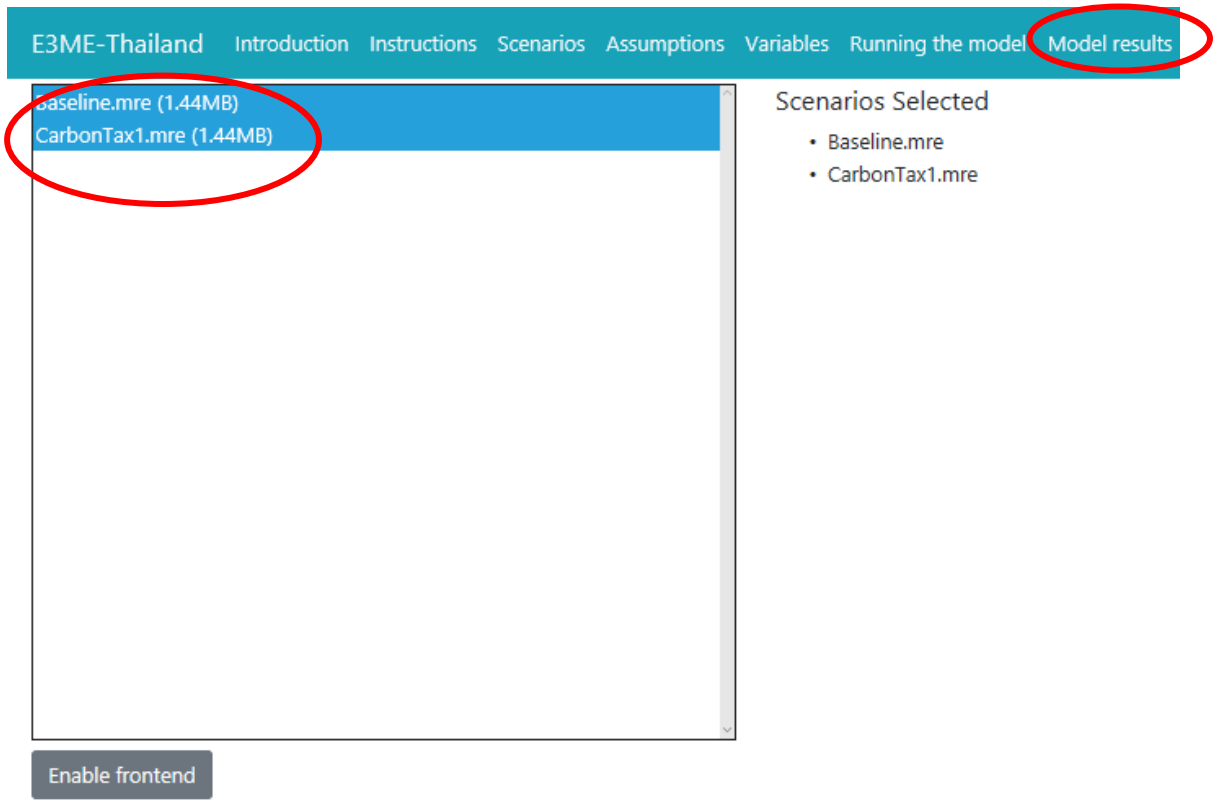
Specify a name for your output file.

Select “Run the model” in order to run the model



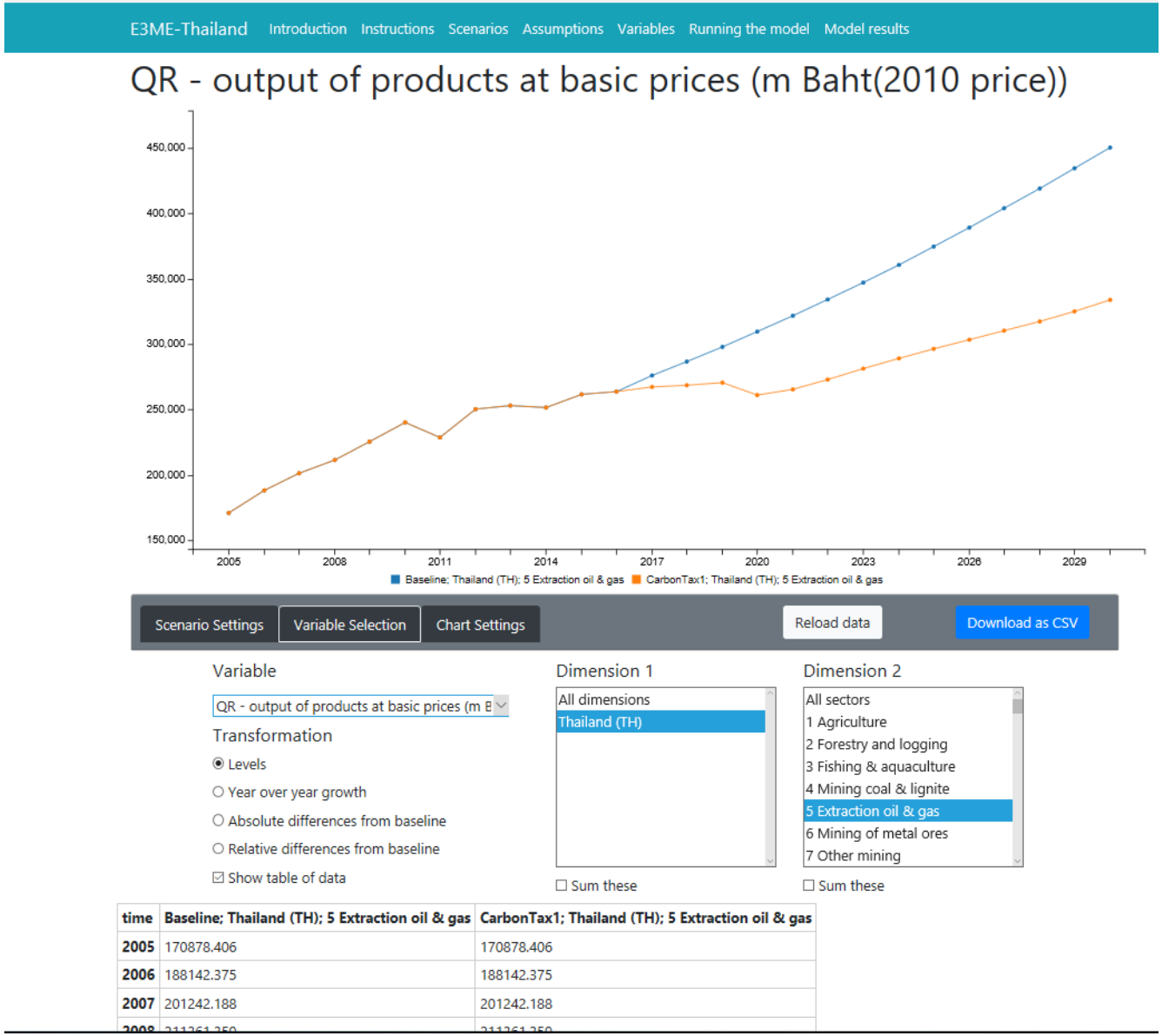
Step 4: Display results

- Model results can be found in the Model Results tab
- Select file(s) to display



cambridge econometrics

Step 4: Display results (cont)



time	Baseline; Thailand (TH); 5 Extraction oil & gas	CarbonTax1; Thailand (TH); 5 Extraction oil & gas
2005	170878.406	170878.406
2006	188142.375	188142.375
2007	201242.188	201242.188
2008	211261.250	211261.250

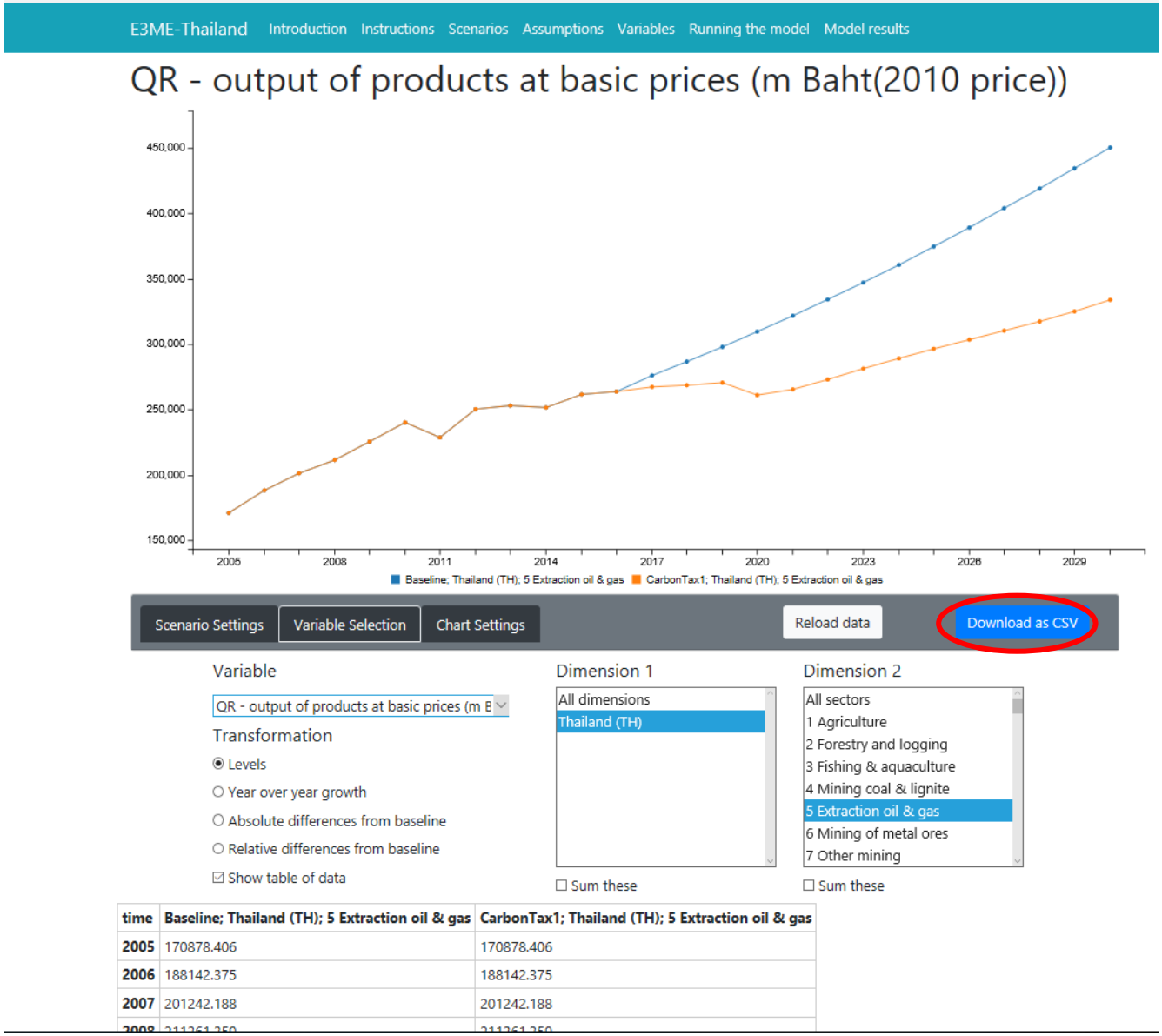
cambridge econometrics

Step 4: Display results (cont)

- Inspect one file: variables& sectors
- Comparison between files: scenarios vs baseline
  - choose any baseline to compare with
  - inspect results by variablesand sectors
  - sum across dimensions
  - level, absolute & percentage differences from baseline
- Option to export to .csv

cambridge econometrics

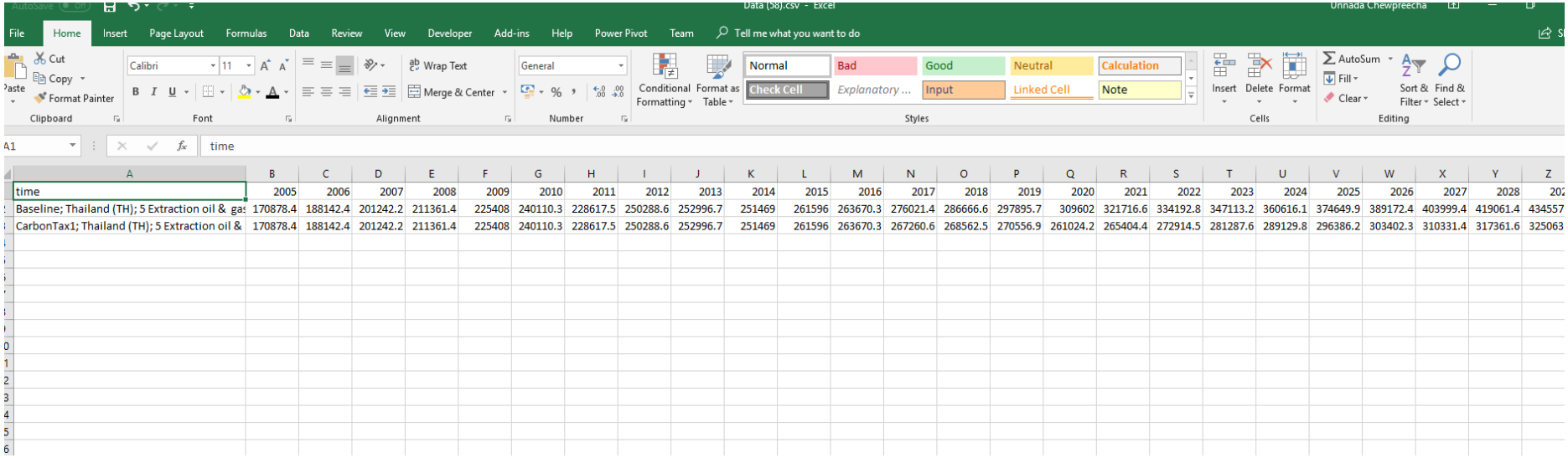
Step 5: Extract model results (optional)



time	Baseline; Thailand (TH); 5 Extraction oil & gas	CarbonTax1; Thailand (TH); 5 Extraction oil & gas
2005	170878.406	170878.406
2006	188142.375	188142.375
2007	201242.188	201242.188
2008	211261.250	211261.250

cambridge econometrics

Step 5: Extract model results (cont)



time	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	202
Baseline; Thailand (TH); 5 Extraction oil & gas	170878.4	188142.4	201242.2	211361.4	225408	240110.3	228617.5	250288.6	252996.7	251469	261596	263670.3	276021.4	286666.6	297895.7	309602	321716.6	334192.8	347113.2	360616.1	374649.9	389172.4	403999.4	419061.4	434557
CarbonTax1; Thailand (TH); 5 Extraction oil &	170878.4	188142.4	201242.2	211361.4	225408	240110.3	228617.5	250288.6	252996.7	251469	261596	263670.3	267260.6	268562.5	270556.9	261024.2	265404.4	272914.5	281287.6	289129.8	296386.2	303402.3	310331.4	317361.6	325063

Options to run the model

Option 1: Manager

- basic users
- Windows interface
- user-friendly edit input options
- run model through option in model Manager
- visualisation tools for model results

Option 2: Command Prompt

- intermediate/advanced users
- edit input files in text editor
- run model through Command Prompt
- results in text file format

Option 3: automated runs

- advanced users
- additional software such as Ox or MATLAB to automatically change inputs and run the model repeatedly
- example Target Run software provided
- results in text files & can be read in automatically for further analysis

cambridge econometrics