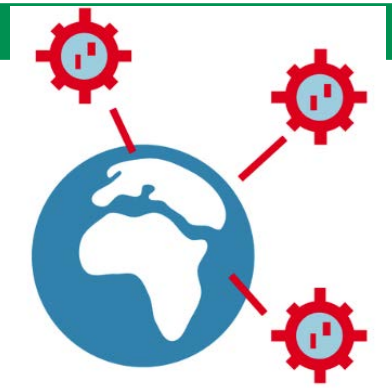


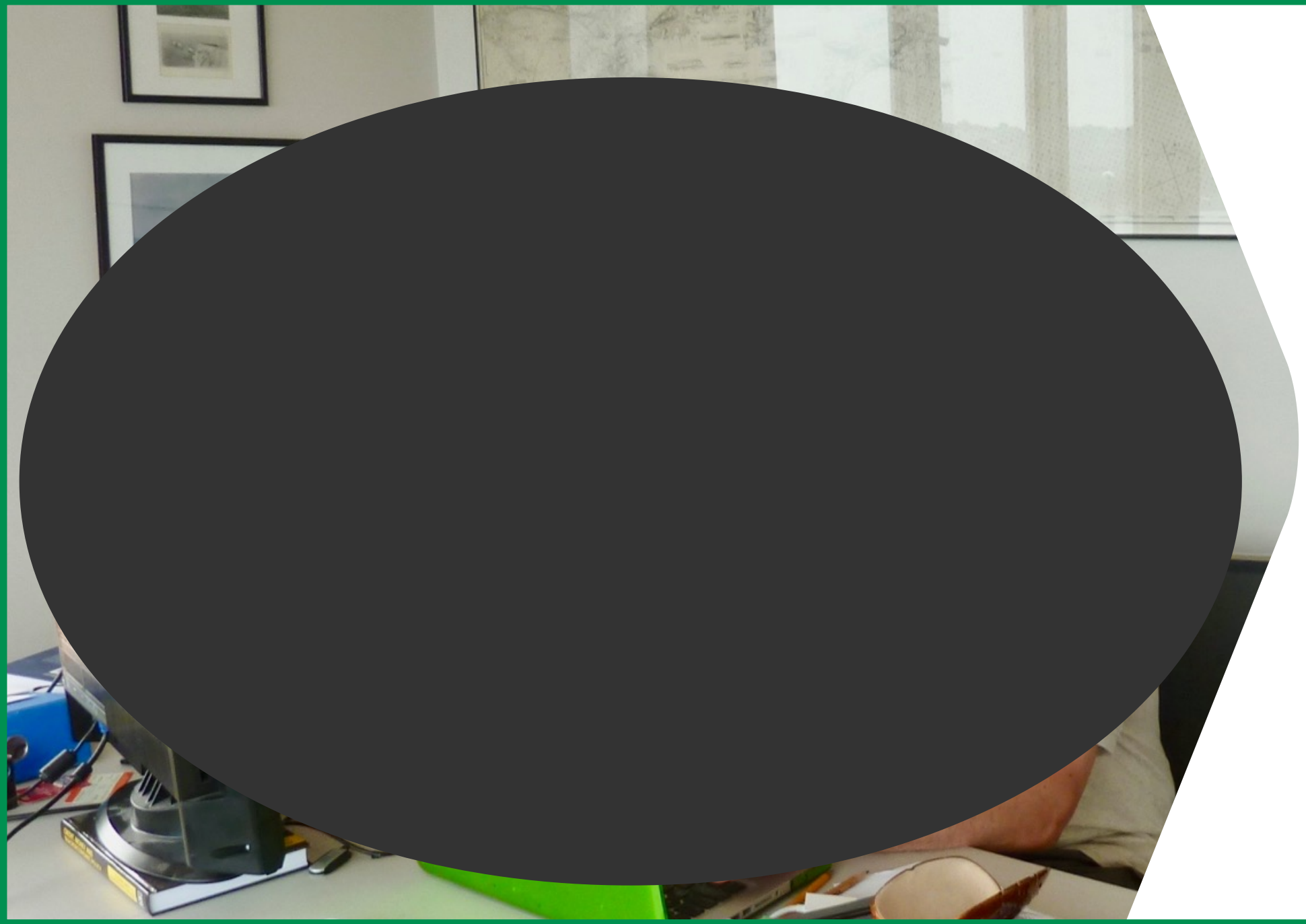
No growth by design - a macroeconomic environmental model for Canada

29 October 2020

Dr. Peter A. Victor

YORK
UNIVERSITÉ
UNIVERSITY

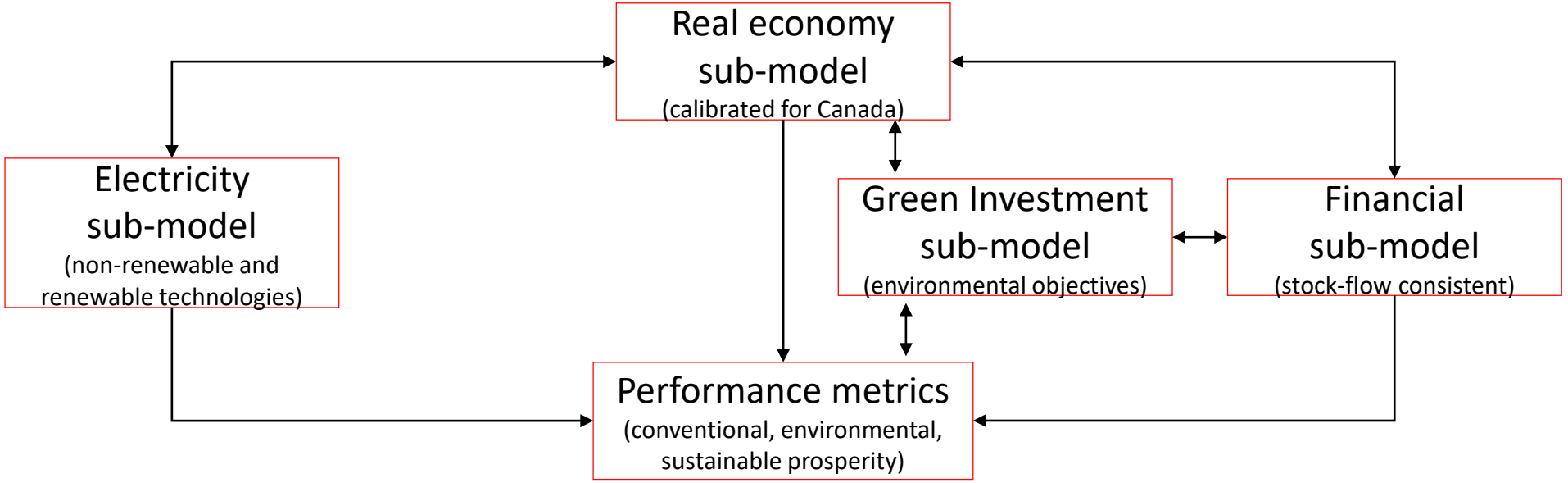
redefine THE POSSIBLE.



Ecological Macroeconomics

LowGrow SFC:
An ecological macroeconomic simulation model

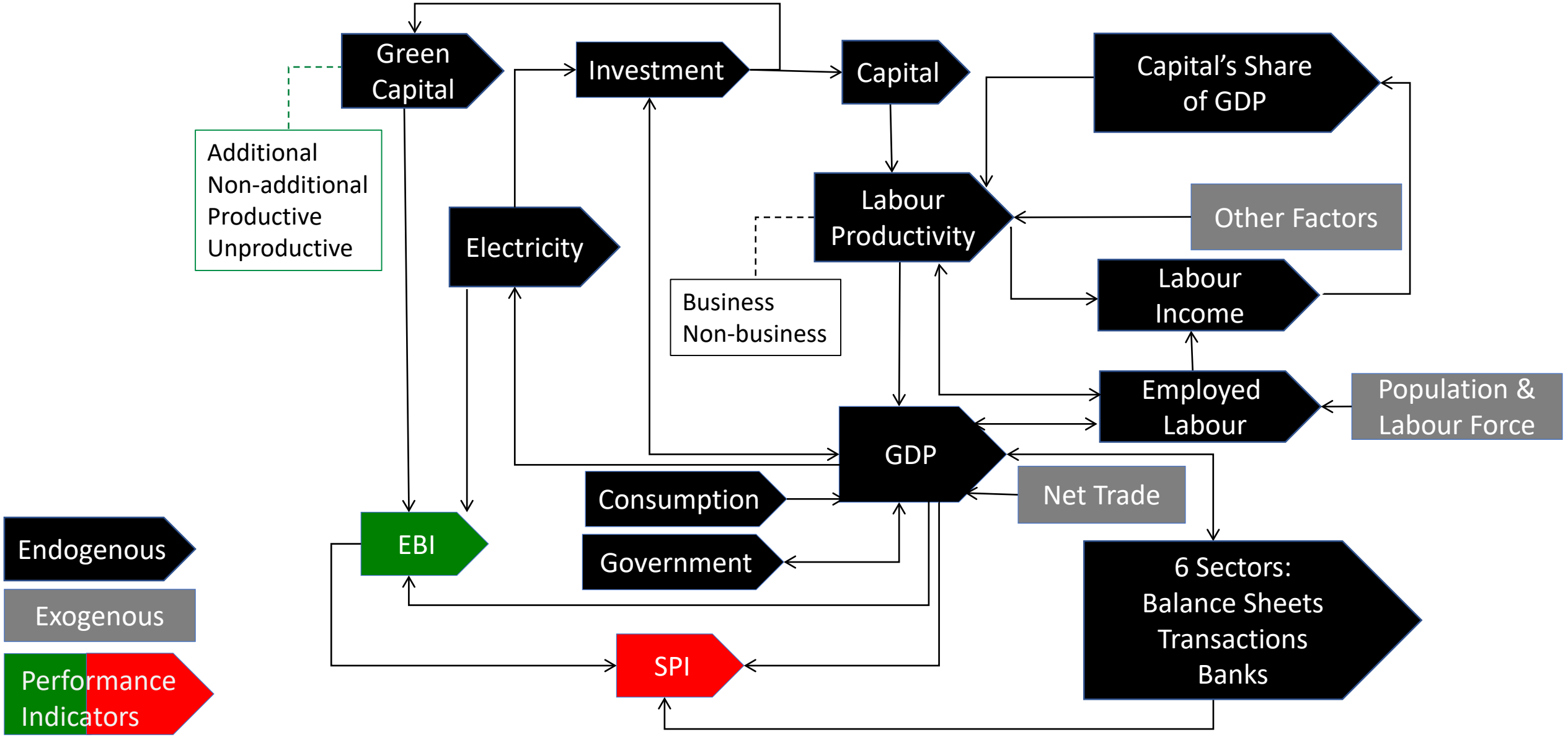
Purpose: to explore alternative possible futures encompassing economic, social and environmental considerations



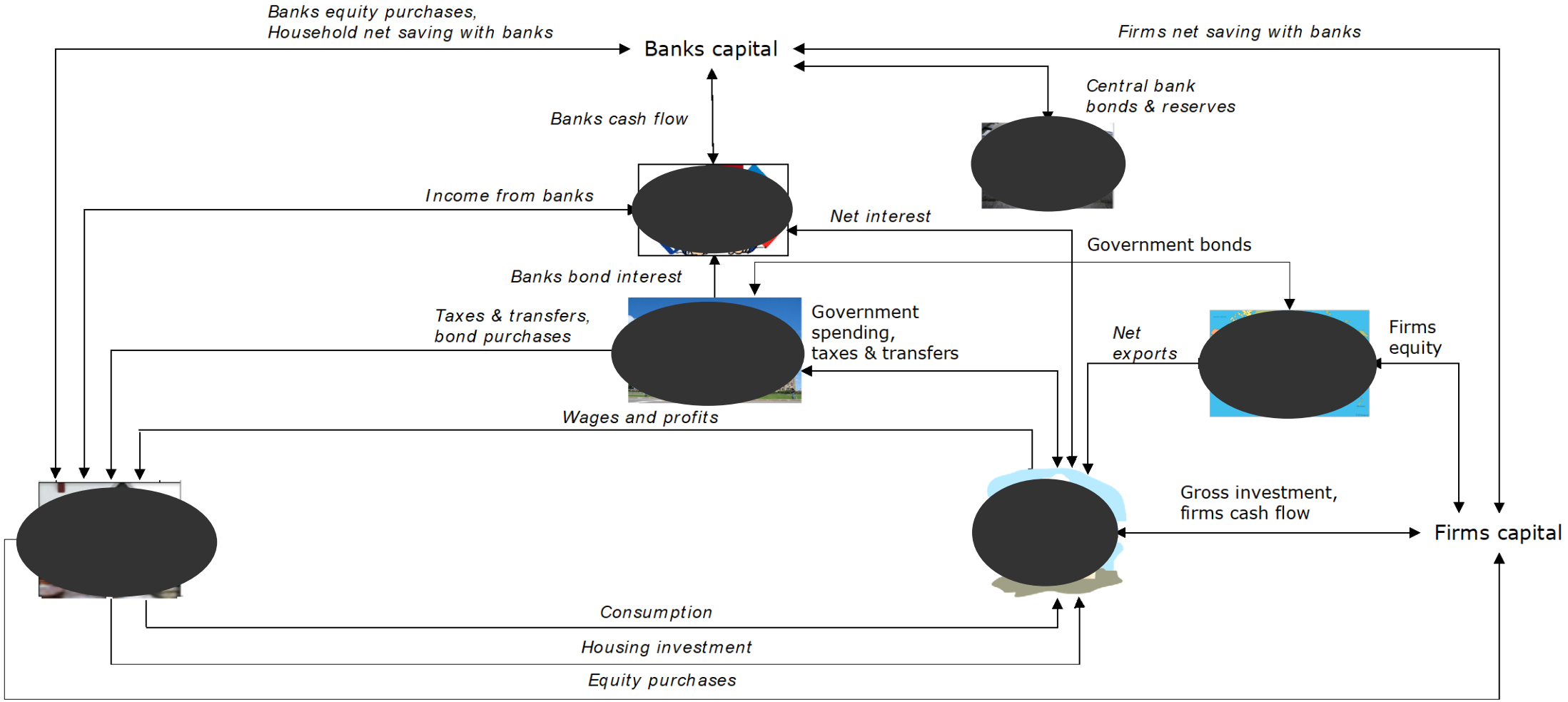
Policy driven scenarios:

- carbon price driving shift to renewables
- mandated green investment
- electrification of transportation
- shorter work year
- income redistribution

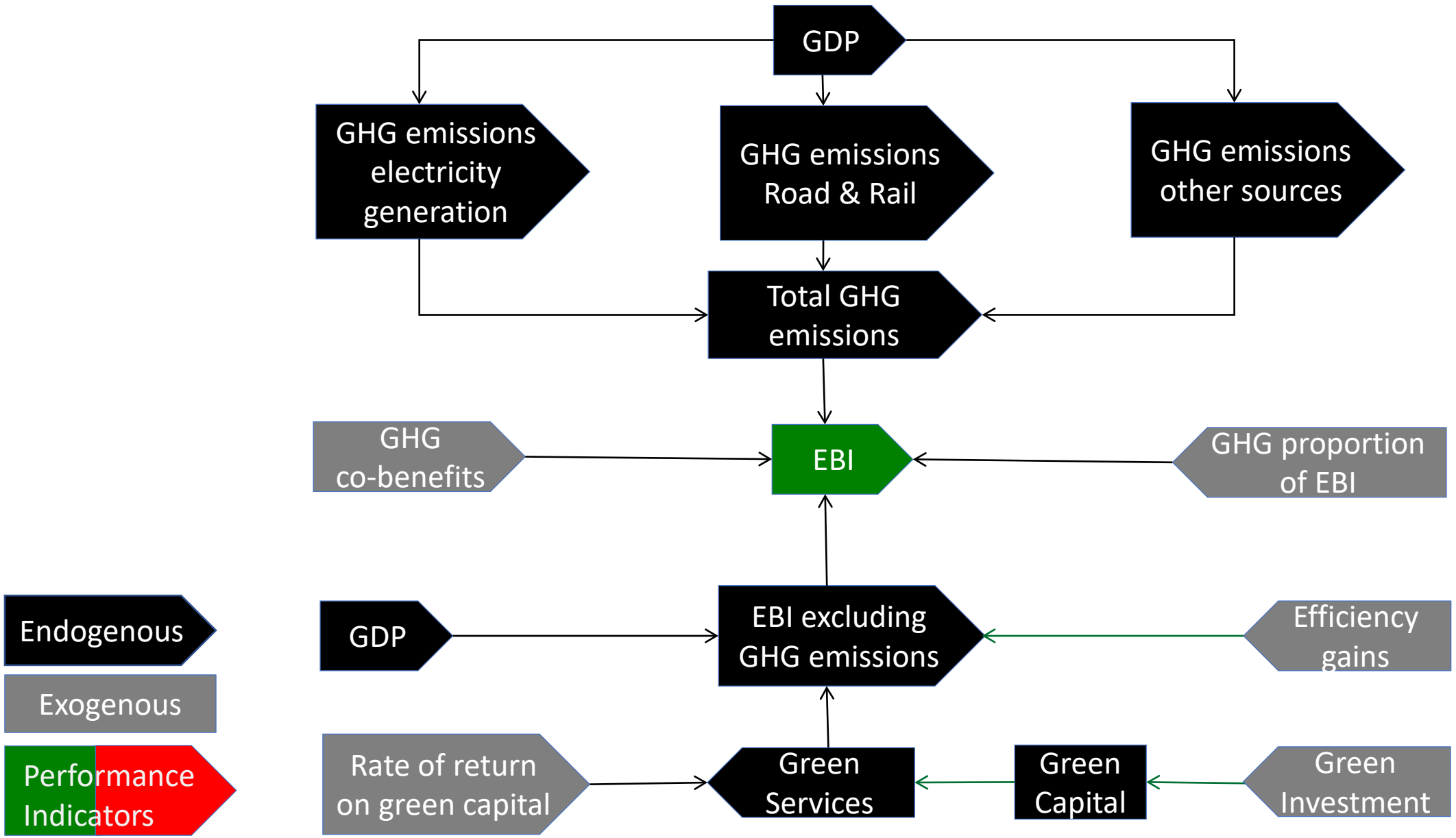
LowGrow SFC: Basic Model Structure



National Accounts – Six Sectors



Environmental Burden Index EBI



Three Scenarios

1. Base Case

- Continuation of current trends and relationships

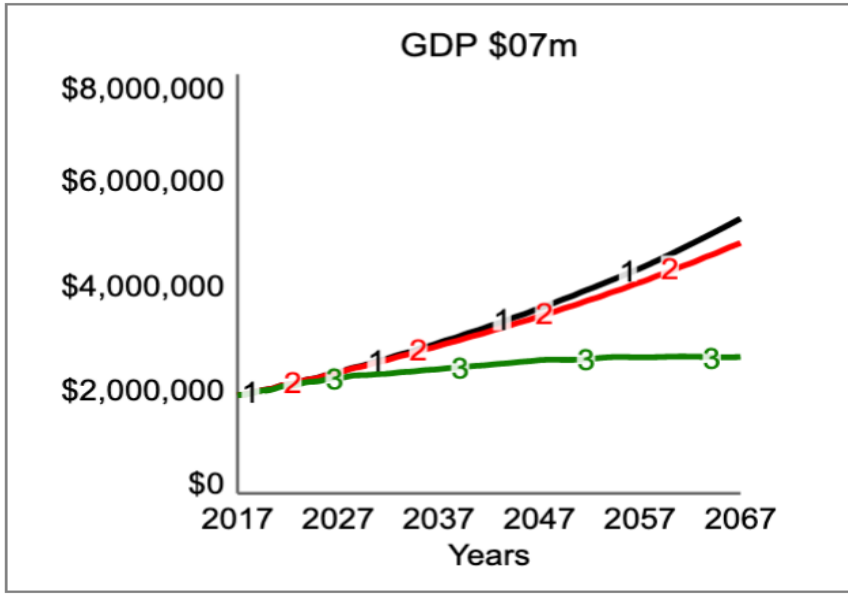
2. Carbon Reduction

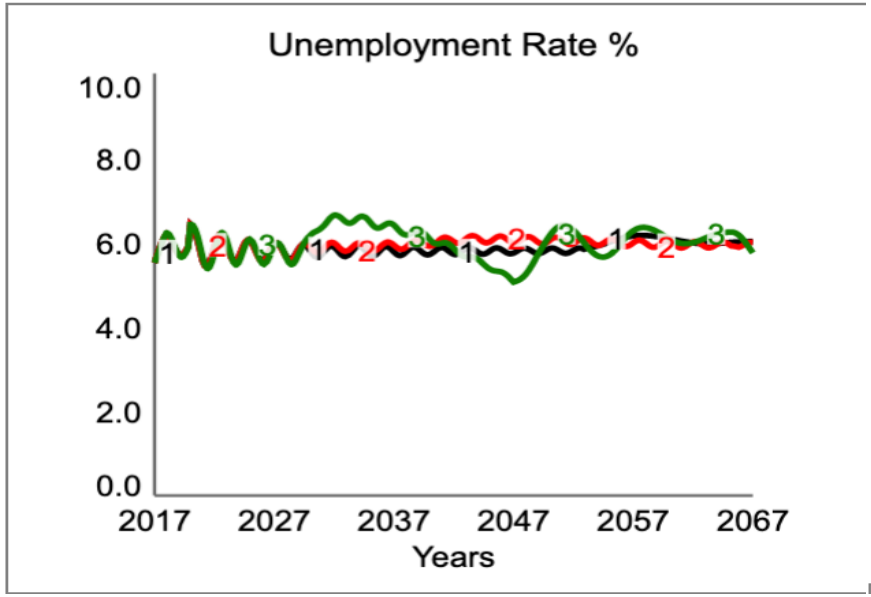
Add:
- Price on carbon emissions from electricity generation
- Carbon abatement by non-electricity sectors
- Electrification of road and rail transportation

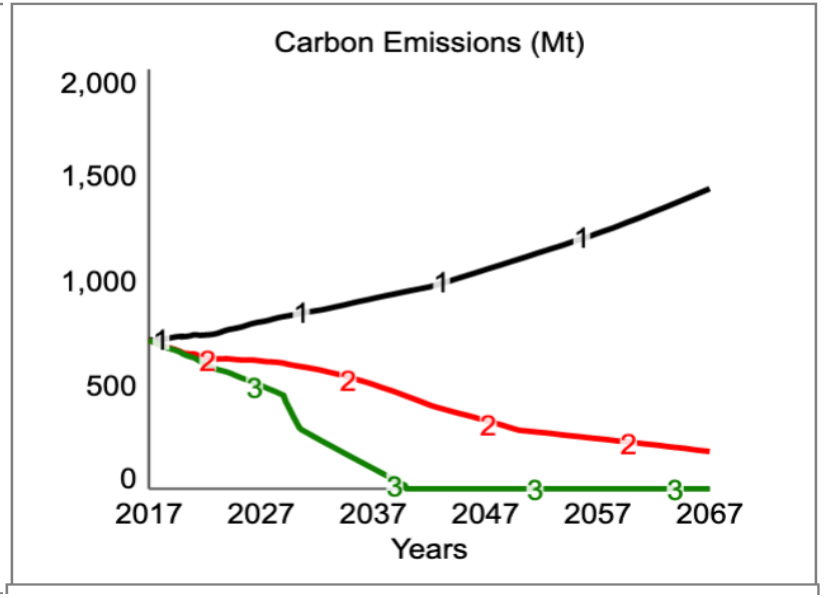
3. Sustainable Prosperity

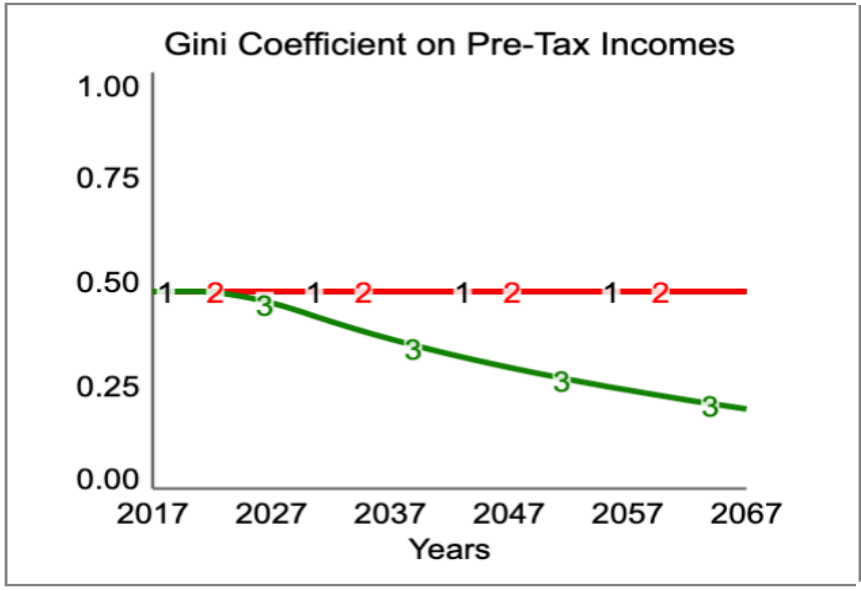
Add:
- Net zero carbon emissions
- Switch from brown to green investment
- Increased transfer payments to reduce income inequality and reduce poverty
- Reduced work hours
- Lower rate of population growth

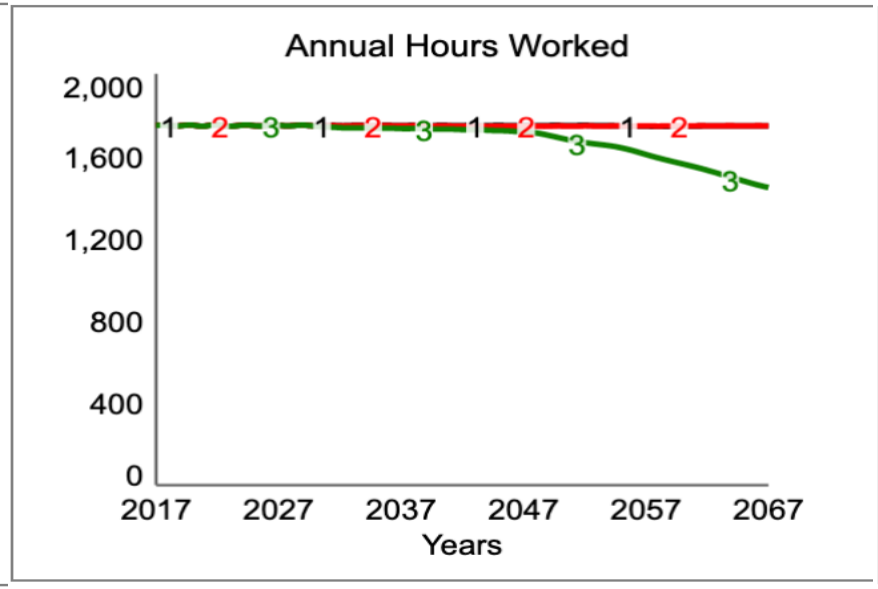
Examples of Scenario Results

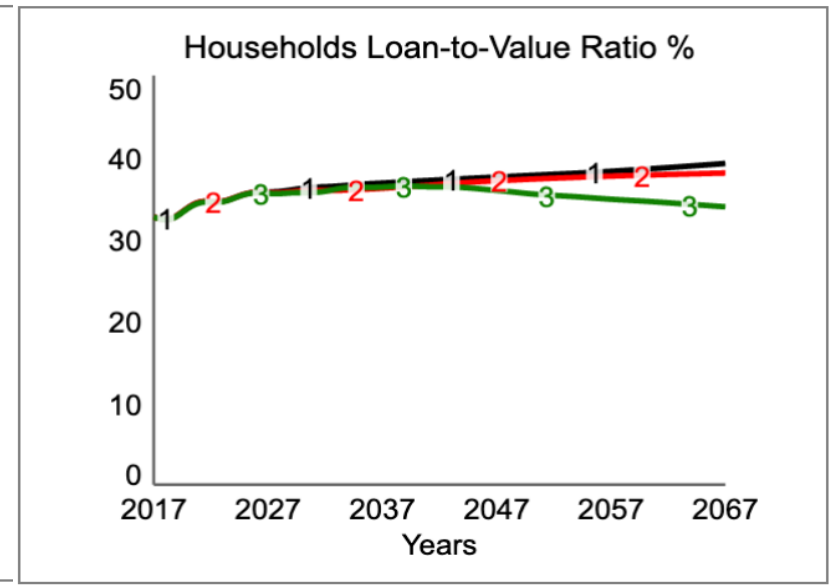






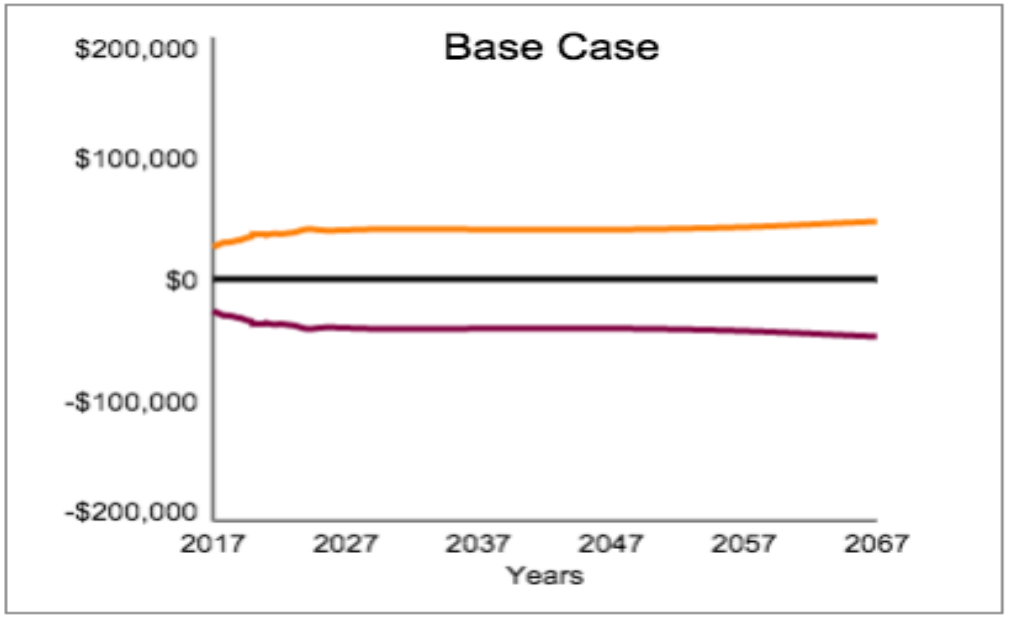


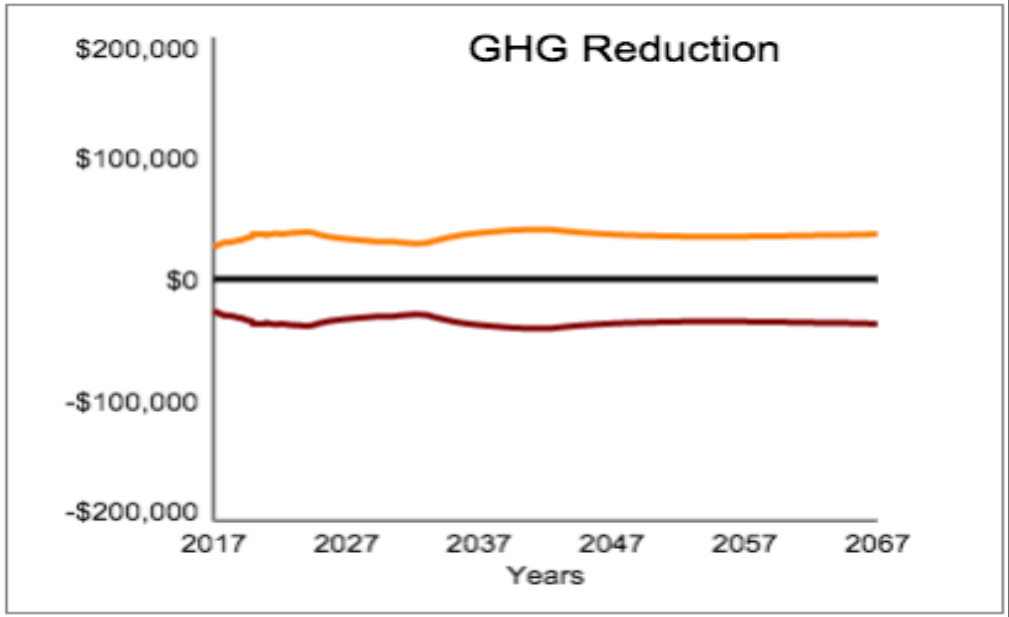




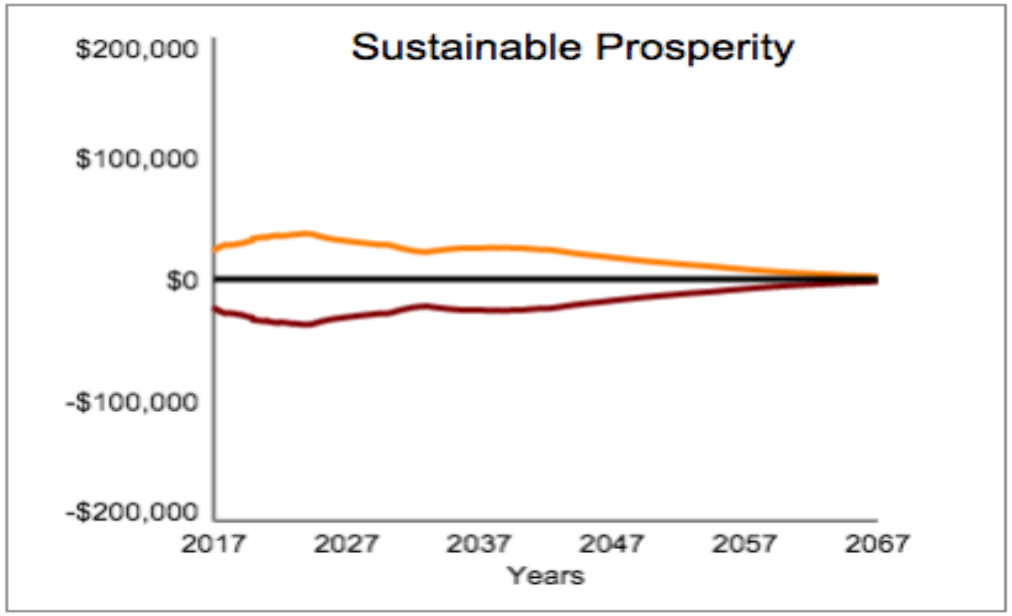
BASE CASE **CARBON REDUCTION** **SUSTAINABLE PROSPERITY**

Net Lending $07m

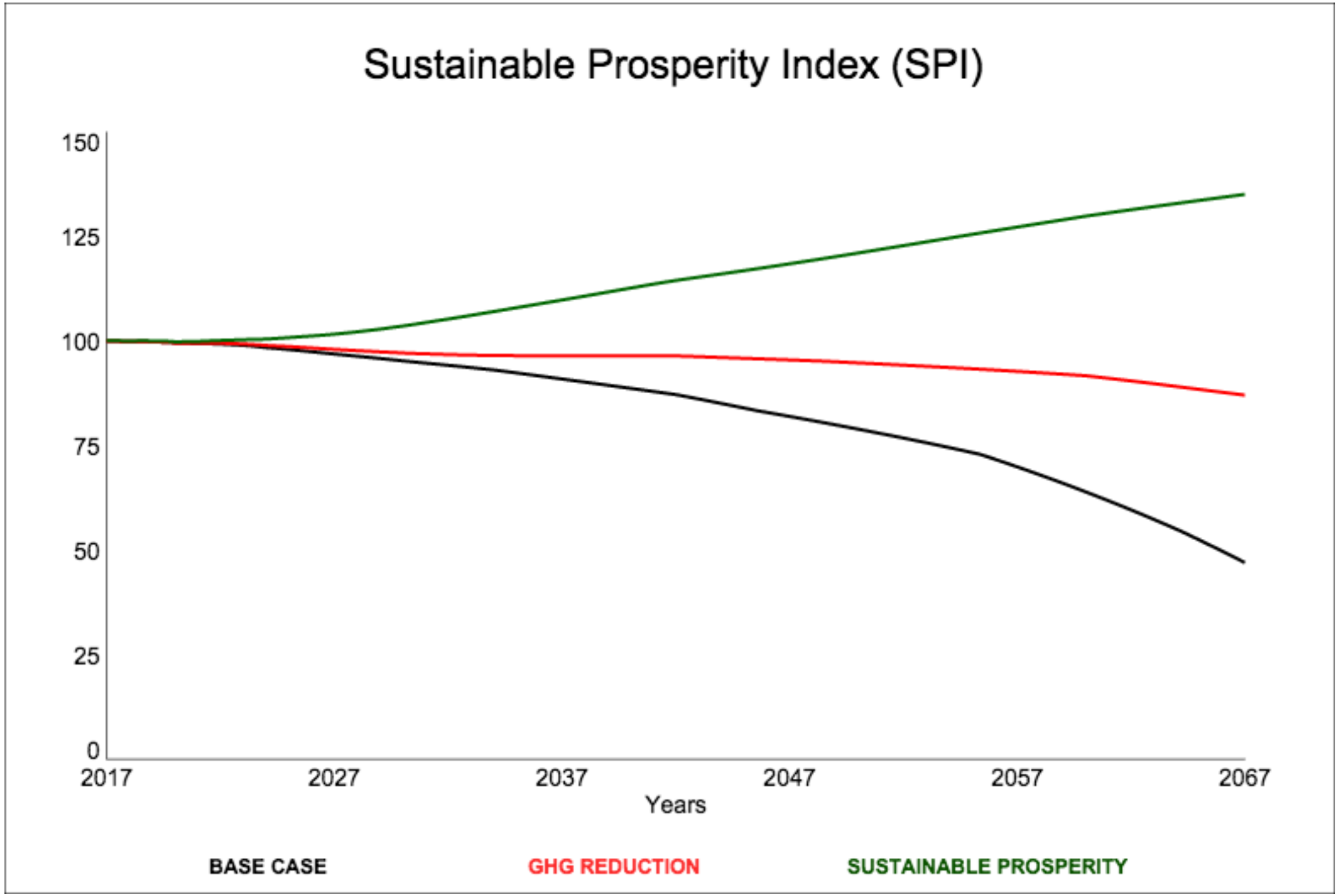




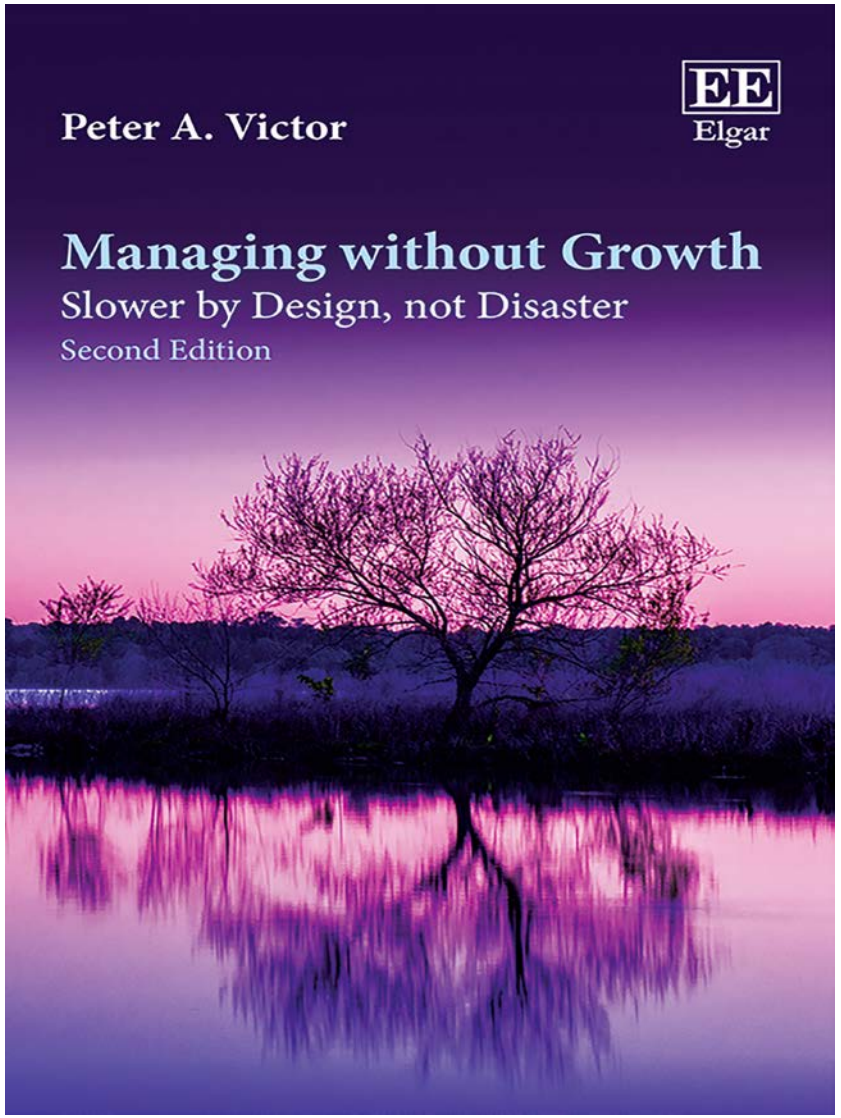
Private Sector Net Lending
Public Sector Net Lending
Total Sector Net Lending



Sustainable Prosperity Index (SPI)


Sustainable Prosperity Index (SPI)
150
125
100
75
50
25
0
2017
2027
2037
2047
2057
2067
Years
BASE CASE
GHG REDUCTION
SUSTAINABLE PROSPERITY

Thank you



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Analysis

The Transition to a Sustainable Prosperity-A Stock-Flow-Consistent Ecological Macroeconomic Model for Canada

Tim Jackson[a,*], Peter A. Victor[b]

Watch the video: https://www.cusp.ac.uk/videos/

Visit the website: www.managingwithoutgrowth.com

Run the model: https://tinyurl.com/y3v3x42u