

Economic Impacts of Expanding Vermont's Renewable Energy Standards

INTRODUCTION

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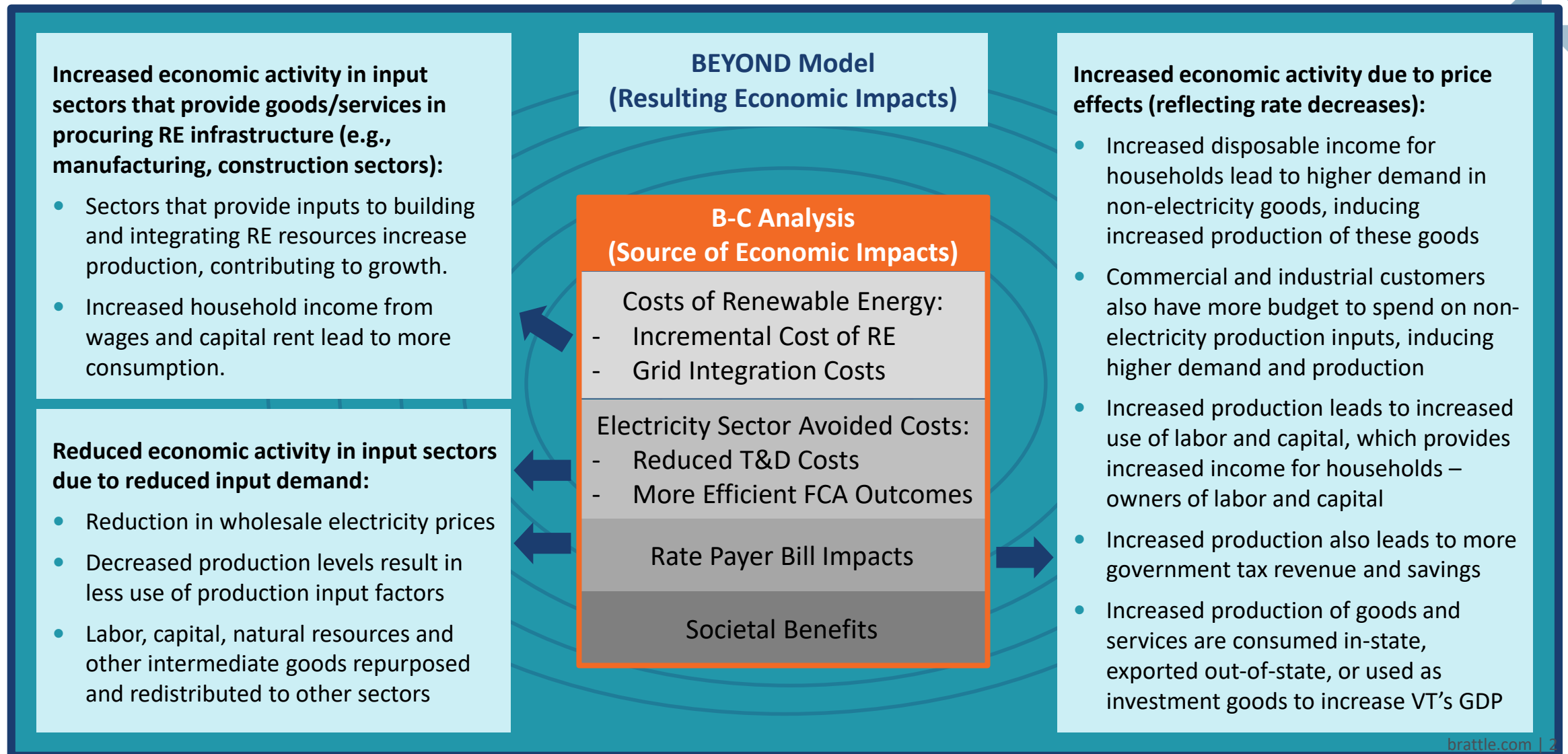
Benefit-Cost Analysis Captures Direct Net Benefits

- **Benefit-Cost Model**

Calculates the direct net benefits resulting from RES/CES policies:

- Costs of building and integrating RE resources
- Avoided electricity sector costs (e.g., reduced T&D costs, improved reliability)
- Rate payer bill impacts
- Societal benefits (environmental benefits)

Comprehensive Impact Assessment of RES/CES Expansion



Economic Impact Assessment Captures Economy-wide Effects



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- **Brattle's Macroeconomic Model (BEYOND)**

Calculates the indirect and induced economic impacts (state GDP) resulting from RES/CES policies:

- Incurred costs of RE increase economic activity in sectors that costs are paid to
- Decrease in electricity sector costs decrease spending in other input sectors, reducing economic activity
- Rate payers' bill savings translate into more consumption and more efficient production of goods/services

Two analyses should be used *together* in providing a comprehensive assessment of cost effectiveness. Macroeconomic impacts should be considered as economy-wide effects of VT's RES/CES policies that are consistent with the policies' direct costs and benefits.

BEYOND Model

- BEYOND is Brattle’s proprietary recursive dynamic computable general equilibrium (CGE) model
- Representation
 - 50 states + Washington, D.C.
 - 71 sectors based on BEA national summary files
 - 5 household income levels
 - Annual time steps (*2023-2035 for current study*)
- Simulates Key interactions in US economy:
 - Interactions between industries, households and government
 - Model dynamics based on circular flow of economic activity
- Key model outputs:
 - GDP/GSP impacts
 - Price effects (wages, return on capital, prices of goods and services)
 - Economic output by sector and region
 - Consumption of goods and factors of production by sector and region

Clarity in the face of complexity



Brattle

