

Data Base Issues: Energy

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GTAP 6

- **in-house back-end volume data preparation**
 - **source: IEA energy balances**
 - **previously done externally**
- **update price indices and exchange rates, not actual price and tax data**
- **bug fixes**

Events

- **in-house assessment**
- **interaction on SGM data**
- **memo from CPB on tax rates**
- **general user feedback**

SGM

- *Second Generation Model*
- **developers: Pacific Northwest National Laboratory: Ron Sands, Allen Fawcett, et al.**
- **several single-country tables; hybrid physical/monetary I-O accounting**
- **need for make matrix in converting energy balances to I-O tables**

CPB memo

- **arose from data development phase of own energy project**
- **GTAP energy tax rates too high?**
- **margins obstruct comparison**
- **tax rates should vary with commodity composition**
- **unexploited untabulated data in IEA's *Energy Prices and Taxes***

General use feedback

- **excess emissions from petroleum products**
 - not in the standard data set
 - fuel or feedstock?
 - overstated intra-industry usage of petroleum products
- **international marine bunkers**
 - know who sells them
 - don't know who uses them

Situation: volumes

- **IEA *Energy Balances* a good basis**
- **difficulties in particular areas:**
 - **heat, combined heat and power**
 - **transfers**
 - **international marine bunkers**
 - **energy from non-energy industries (blast furnace gas, ethanol, charcoal ...)**

Situation: prices

- **data incomplete:**
 - **country coverage limited**
 - **commodity coverage limited**
- **some sources not continued (e.g., ADB's *Energy Indicators*)**
- **GTAP energy module:**
 - **messy programs**
 - **unmaintained source data**

Source data maintenance

- **last complete update to 1995**
- **Jean-Marc Burniaux updated a few series to 1997**
- **for some items, latest available data are early 90s**
- **prices: use price indices to update to reference year**
- **taxes: take latest available as is**

Work

- **price and tax data update: 6-E**
- **program bug fixes and refinements: 7**
- **backend volumes processing refinement: 7**
- **deeper issues: >7**

Price and tax data update

- **objective: complete update of data from ongoing sources**
- **status: preliminary results in hand**
- **possible extension: exploit untabulated information from IEA *Energy Prices and Taxes***

Average price changes (%)

	import	domestic
coal	-7	-9
oil	14	18
gas	-9	16
refined	-23	28
electricity	-22	-7

Selected price changes

	old	new	$\Delta\%$
usa gas	99	173	+74
jpn p_c	274	420	+53
zaf ely	791	215	-73
rus gas	92	53	-43
ind p_c	179	299	+67
ven ely	753	192	-74

Bugfixes and refinements

- **discontinue industry price adjustment**
- **travelers' expenditures**
- **land, sea, air splits**
- **international marine bunkers**
- **CO2 emissions**
- **miscellaneous mapping issues**

Remaining issues

- **distributed gas; domestic margins**
- **transport: industry/household split**
- **treatment of heat and CHP plants**
- **price and tax variation across uses**
- **transfers; make matrix**
- **energy production by non-energy sectors**
- **prices: expanded commodity coverage**