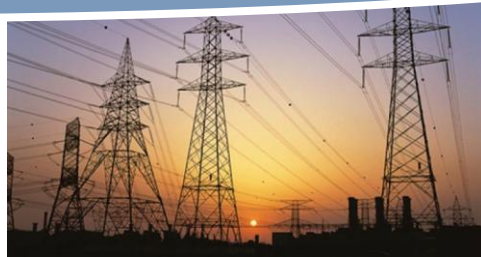


The Quebec LCI database - Feedback from a National Database Initiative

Presented at the 3rd Internationalecoinvent Meeting
St.Malo, Oct. 5, 2012

Pascal Lesage, for the CIRAIG



INTERNATIONAL CHAIR
IN LIFE CYCLE ASSESSMENT

A research unit of the



CIRAIG™



**ÉCOLE
POLYTECHNIQUE
MONTRÉAL**

Outline

- Why a Quebec LCI database
- Why as an ecoinvent National Database Initiative
- How's it going?
 - **Background work**
 - **Actual data collection**
- Discussion
- Next steps



Why a database? CIRAIG perspective

- Looking for funding since 2007
- Improve pertinence of our own studies/research
- Facilitate LCA in Canada
- Support burgeoning business and field of research



Why a database? Quebec government perspective

Publicly funded project - \$1.5M over 3 years (2011-2013)

Involved ministries:

Economic Development, Innovation and Exportation:

- Support carbon footprinting of Quebec products, where Quebec is often highly competitive due to very high share of hydroelectricity

Sustainable development, Environment and Parks:

- Support sustainable development strategy

Scope **solely Quebec** until more resources can be found

Why partner with an existing LCI DB?

- Quicker
- Cheaper
- Instantaneous integration in process networks



Why partner with ecoinvent?

- **Unit process level database a technical requirement**
- Comprehensiveness
- Coherence
- Uncertainty
- Use and resilience
- Expected methodological development (consequential model, regionalisation, IO, ...)
- Openness towards other ideas
- Free data review
- Tools to submit data
- NDI structure →



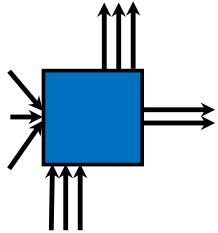
NDI – what it entails

- We provide:
 - Data
 - Names of potential geography editors
 - Supply-use tables
- In exchange for:
 - All any data submitter would also have access to (tools, data review, data integration, support...)
 - Revenue sharing (proportional to amount of data submitted)
- Extra: we supplied some funding for additional programming (or speed-up of planned programming)

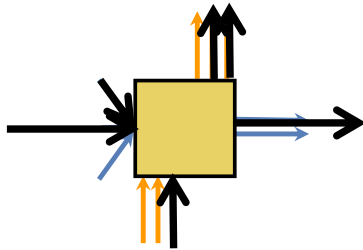


NDI – what it entails: IP

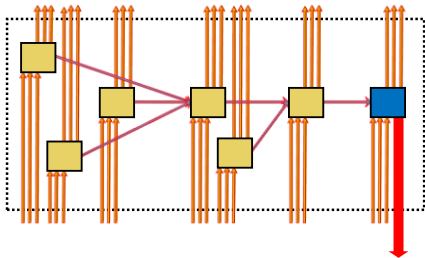
Who own the IP of:



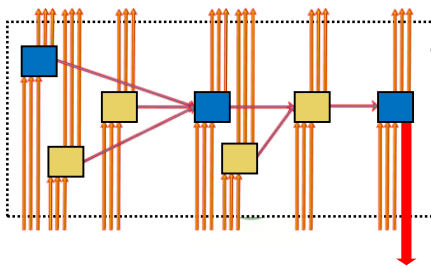
- NDI-created UP dataset → NDI



- Existing UP modified by NDI → NDI, if modification important



- LCI calculated from an NDI UP dataset with ecoinvent data in background → ecoinvent Center



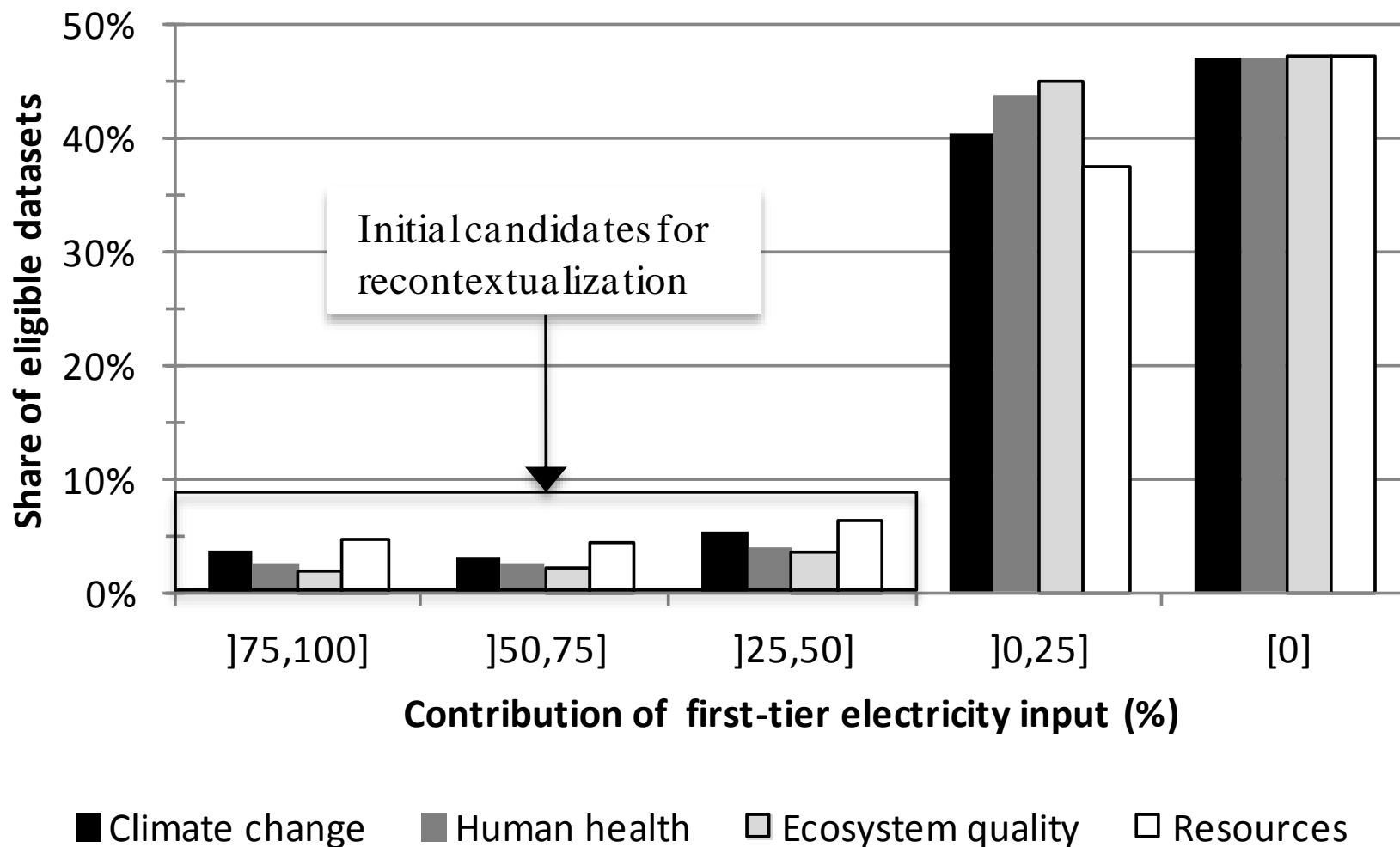
- ...unless >25% of UPs in background (environmental contribution) belong to NDI

What have we done?

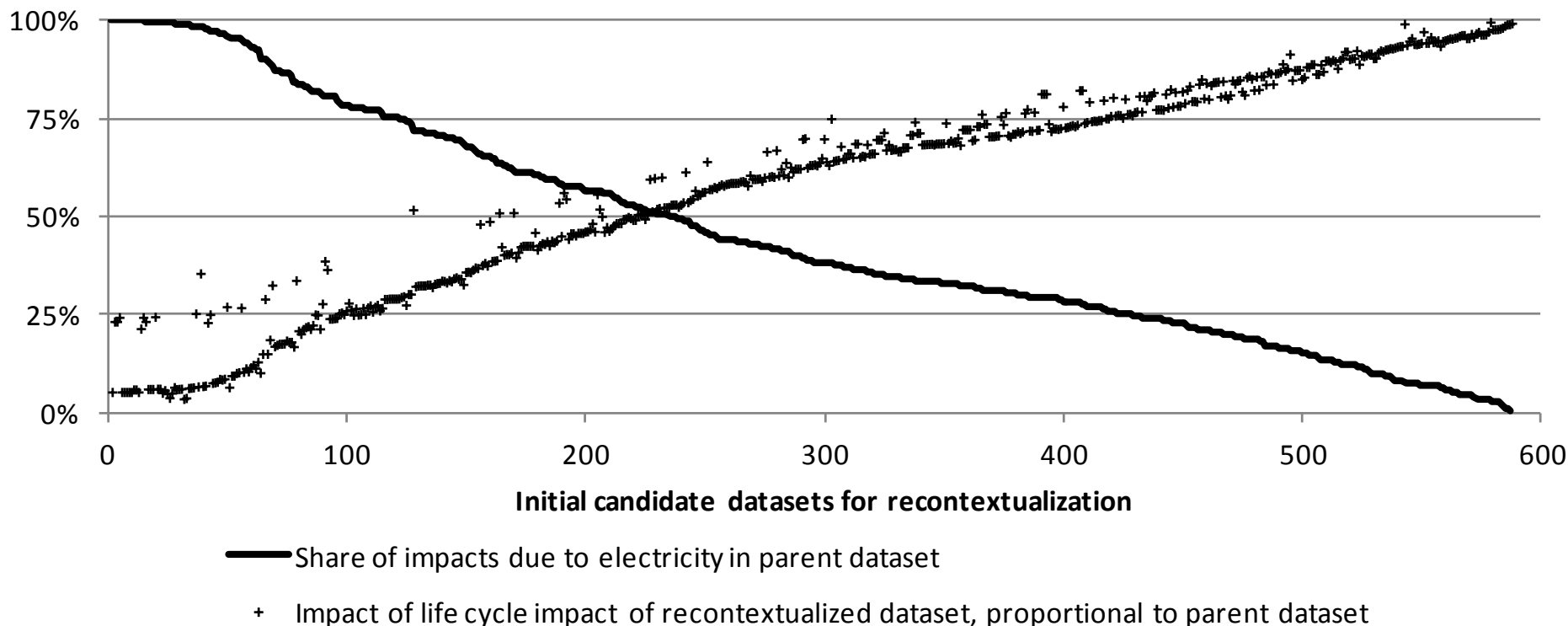
1. Prioritized
2. Produced supply-use tables
3. Modelled electric grid mix
4. Identification of “recontextualization” candidates



Recontextualization for electricity



Recontextualization for electricity



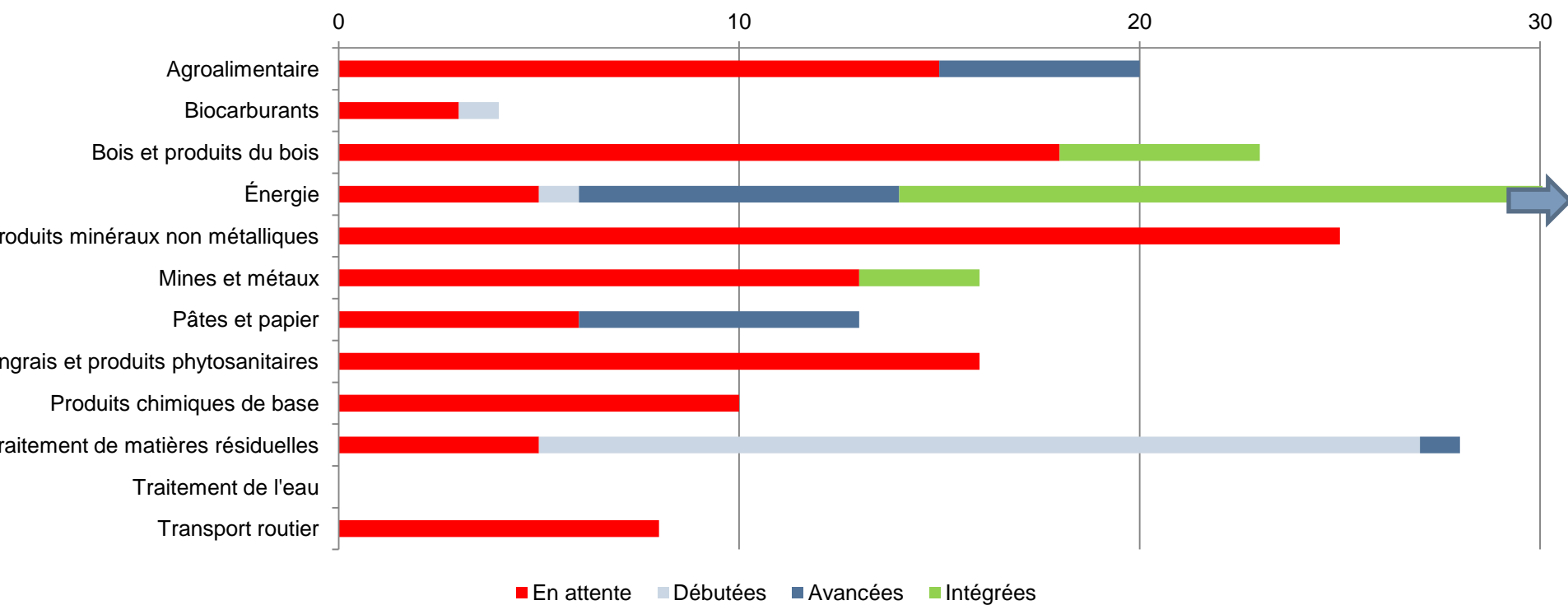
Share of climate change impacts attributable to first-tier electricity consumption in initial candidates for recontextualization and proportional impacts of same datasets when relocated in Quebec

What have we done?

1. Prioritized
2. Produced supply-use tables
3. Modelled electric grid mix
4. Identification of “recontextualization” candidates
5. Sought data
 - **Educative and promotional material**
 - **Cold calls**
 - **Collaborations and data scavenging**
 - **Public data search**
6. Data collection and data entry



Data collection



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Discussion

- Working well:
 - Support from ecoinvent staff
 - ecoEditor
 - Willingness to explore/implement methodological developments (e.g. IMPACT World, dynamic LCA)
- Working less well:
 - Industry buy-in (region too small?)
 - Production volumes!
 - ecoEditor



Next steps

- Funding for database non-recurrent
- To ensure continuity:
 - **Increase scope (ideally North American NDI)**
 - **Increase revenues (add-ons? Increase unit price?)**
 - **Private funding to continue work**
 - **Tweak business model?**

