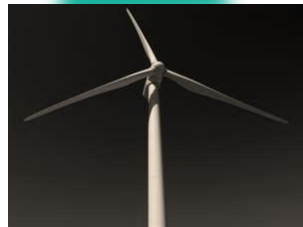


Accounting for RE Purchases in a GHG Inventory: Analysis of Issues, Approaches and Draft GHG Protocol Recommendations

*Renewable Energy Markets Conference
San Francisco, CA
November 15-18*

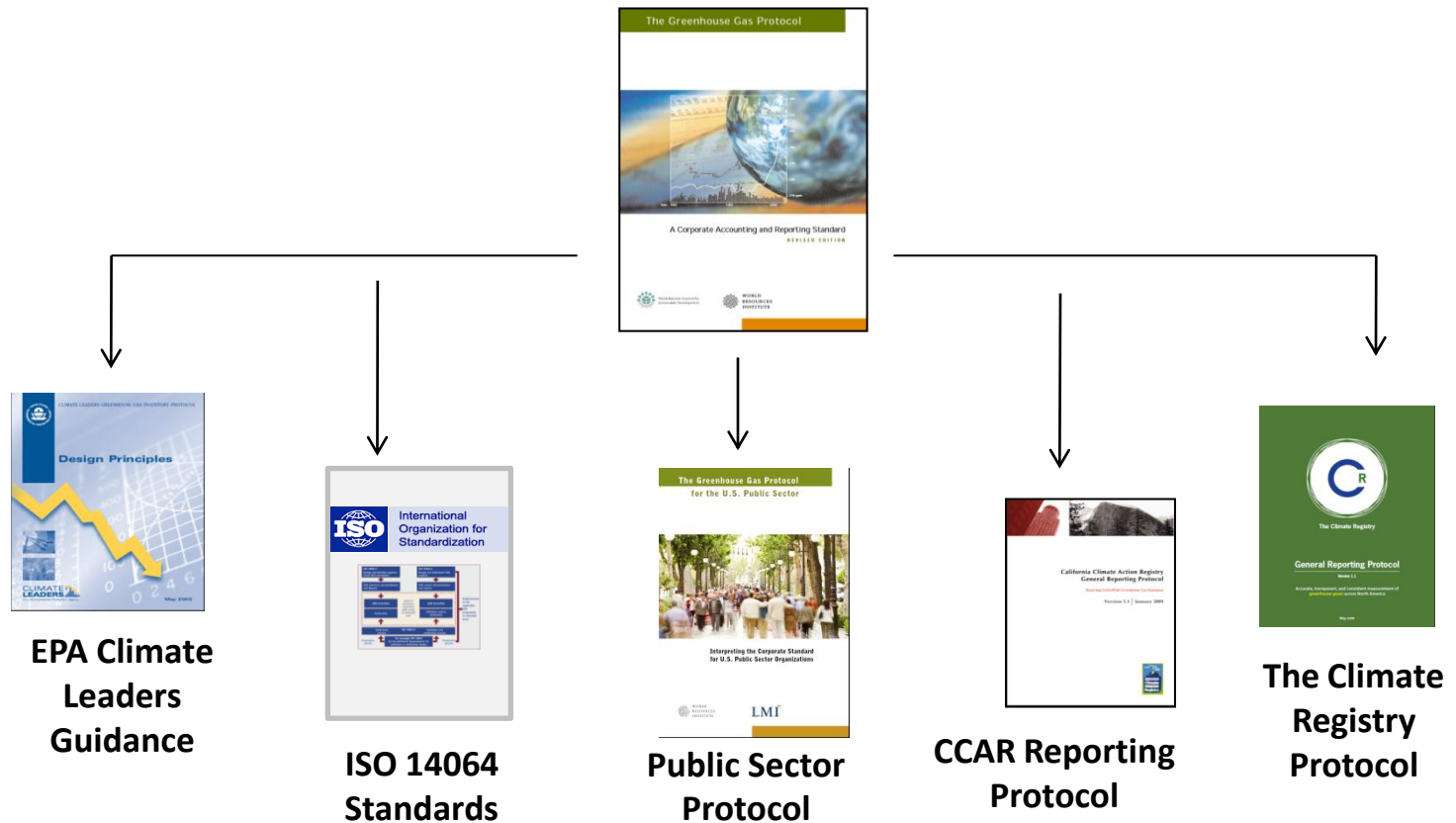
Mary Sotos
Project Lead, GHG Protocol
World Resources Institute

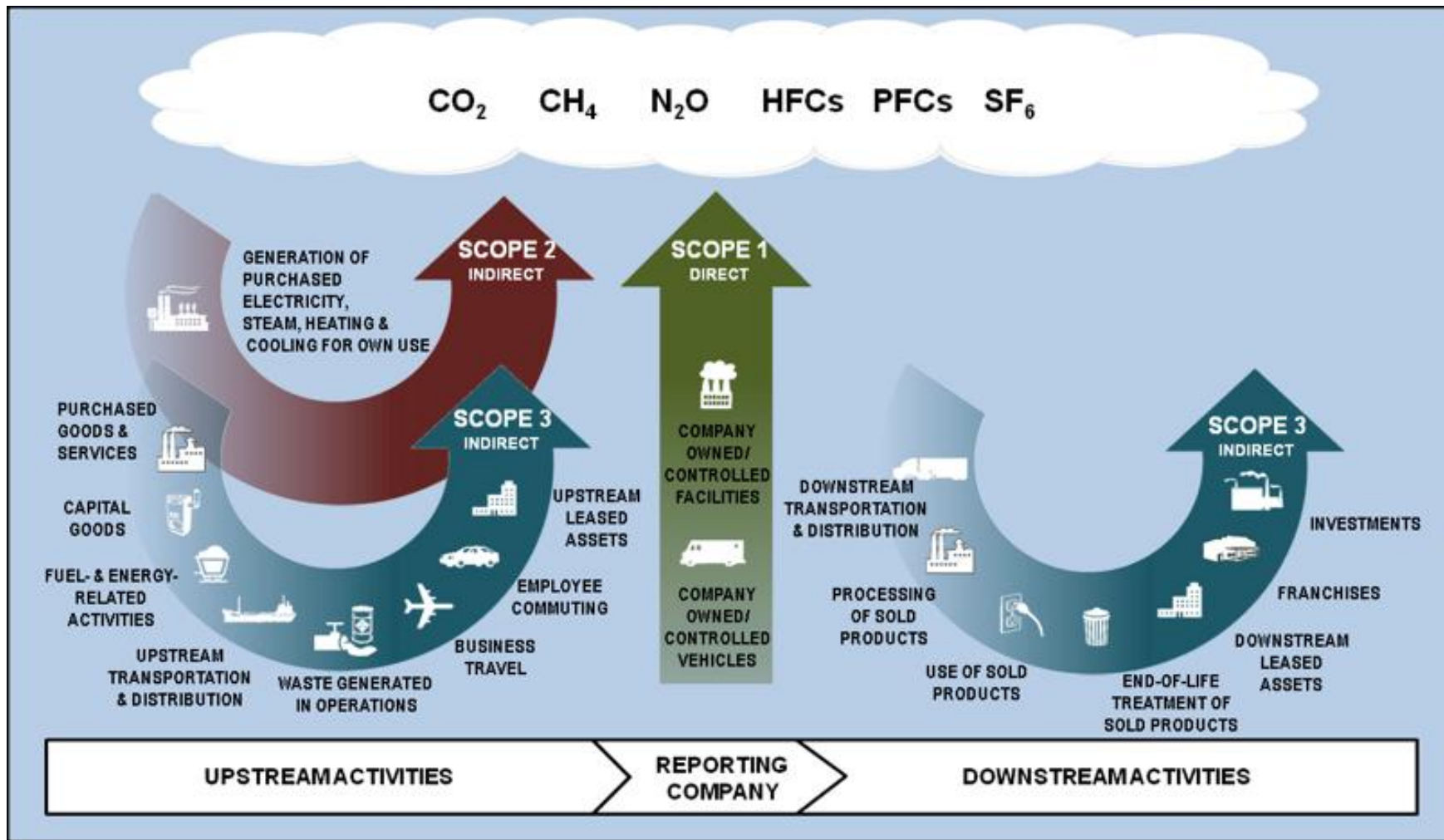


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WBCSD/WRI GHG Protocol





MWh consumed x Grid Average Emission Factor = Total Scope 2

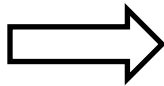


GENERATORS

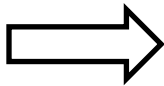
SUPPLIERS

END USERS

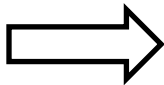
MWh consumed x Grid Average Emission Factor = Total Scope 2



300 tons
100 MWh



200 tons
100 MWh



0 tons
100 MWh

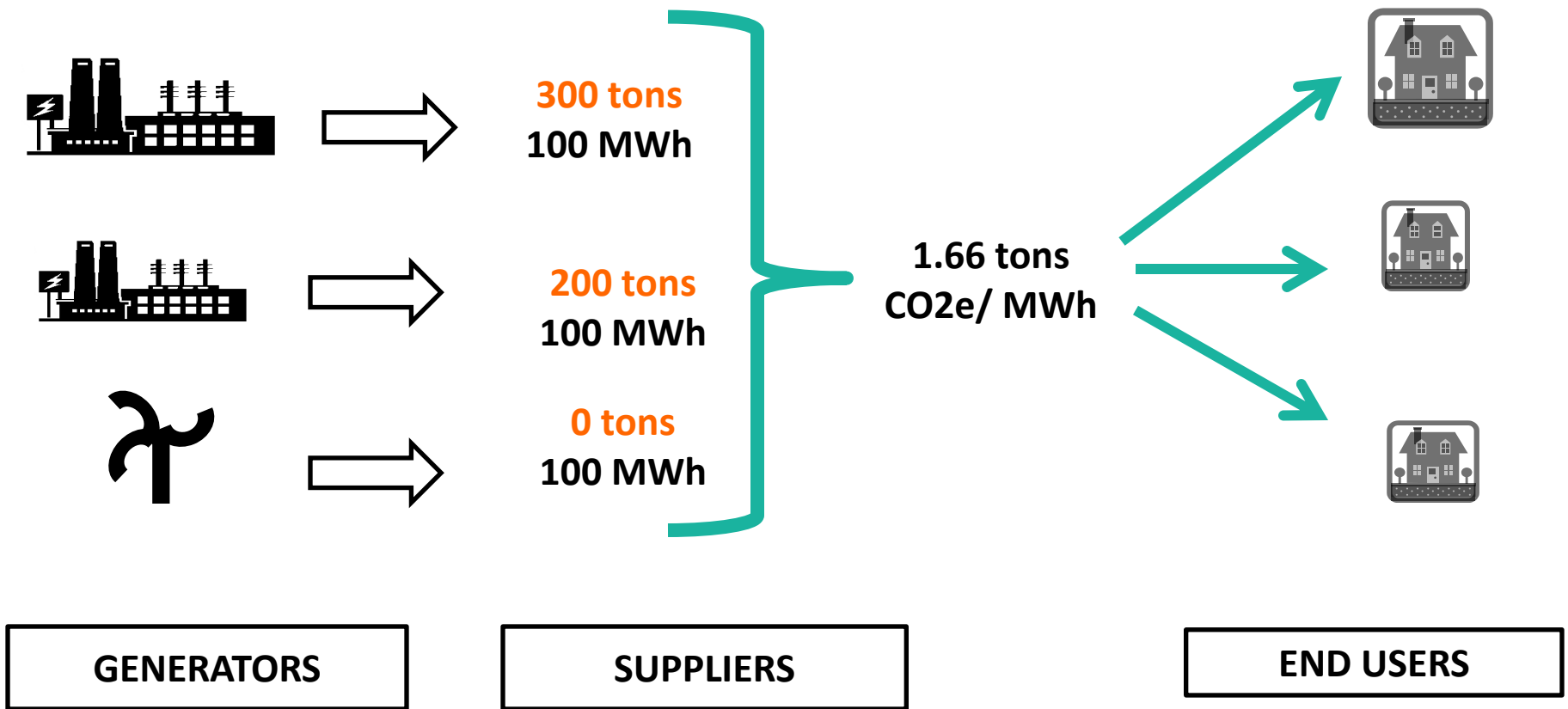


GENERATORS

SUPPLIERS

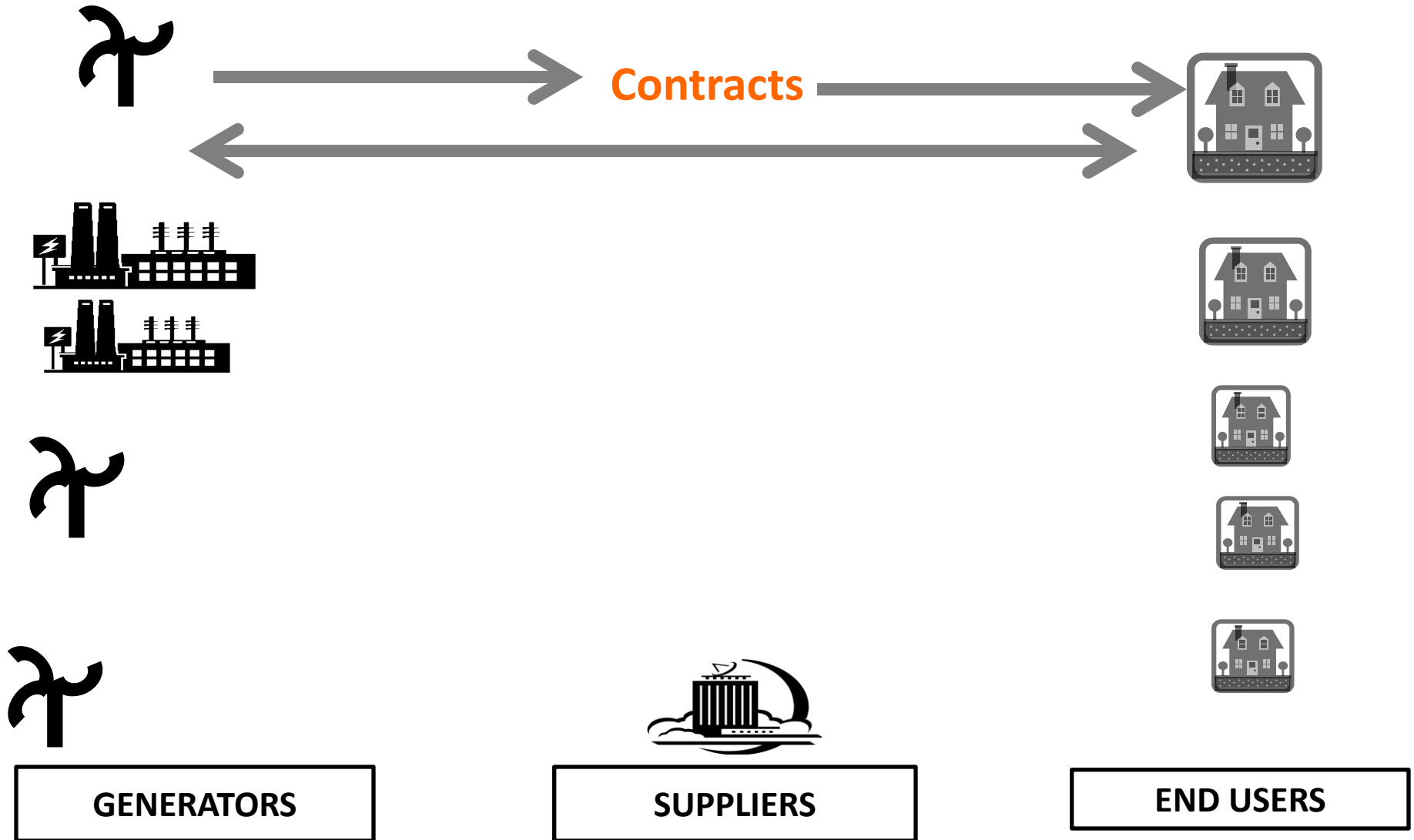
END USERS

MWh consumed x Grid Average Emission Factor = Total Scope 2

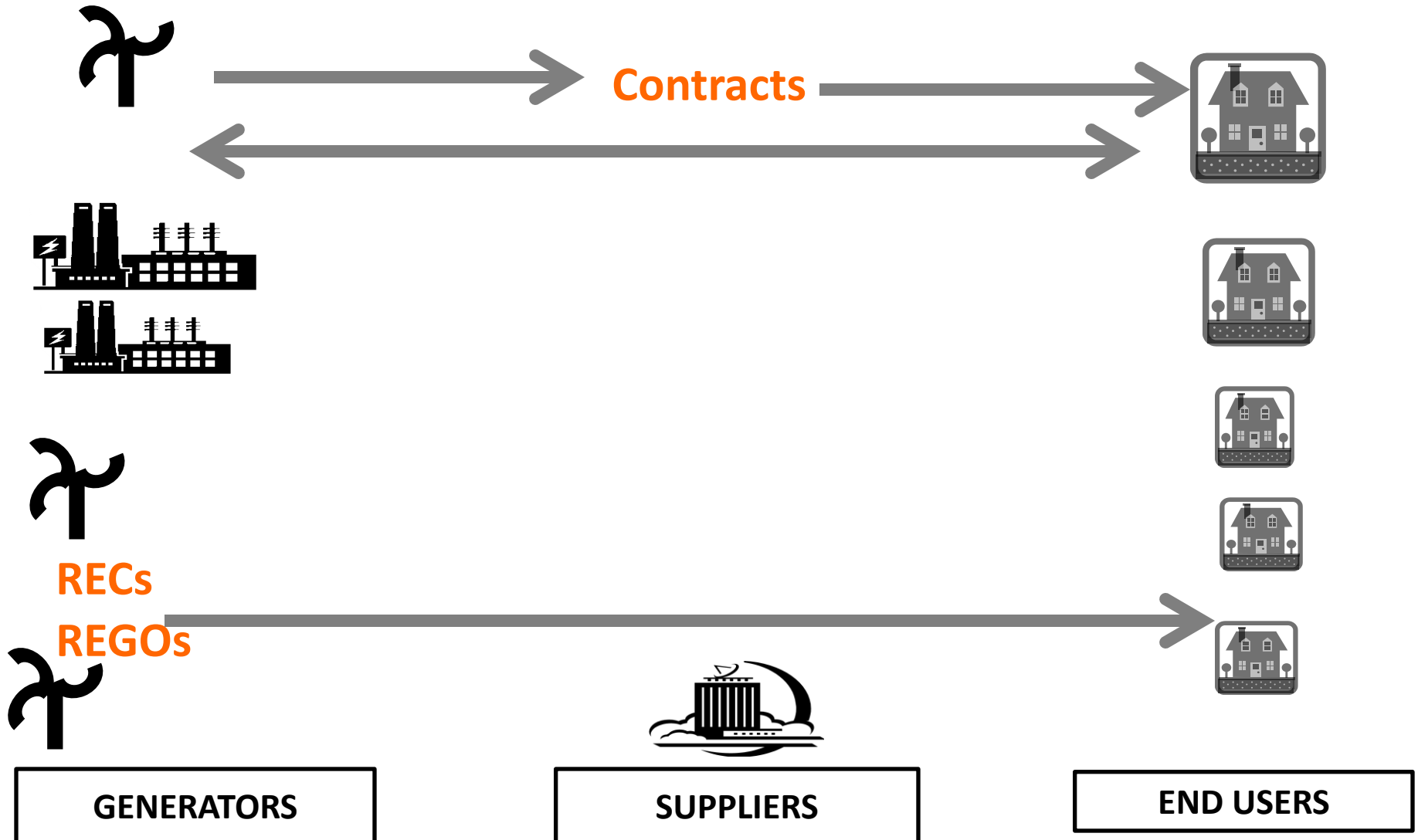


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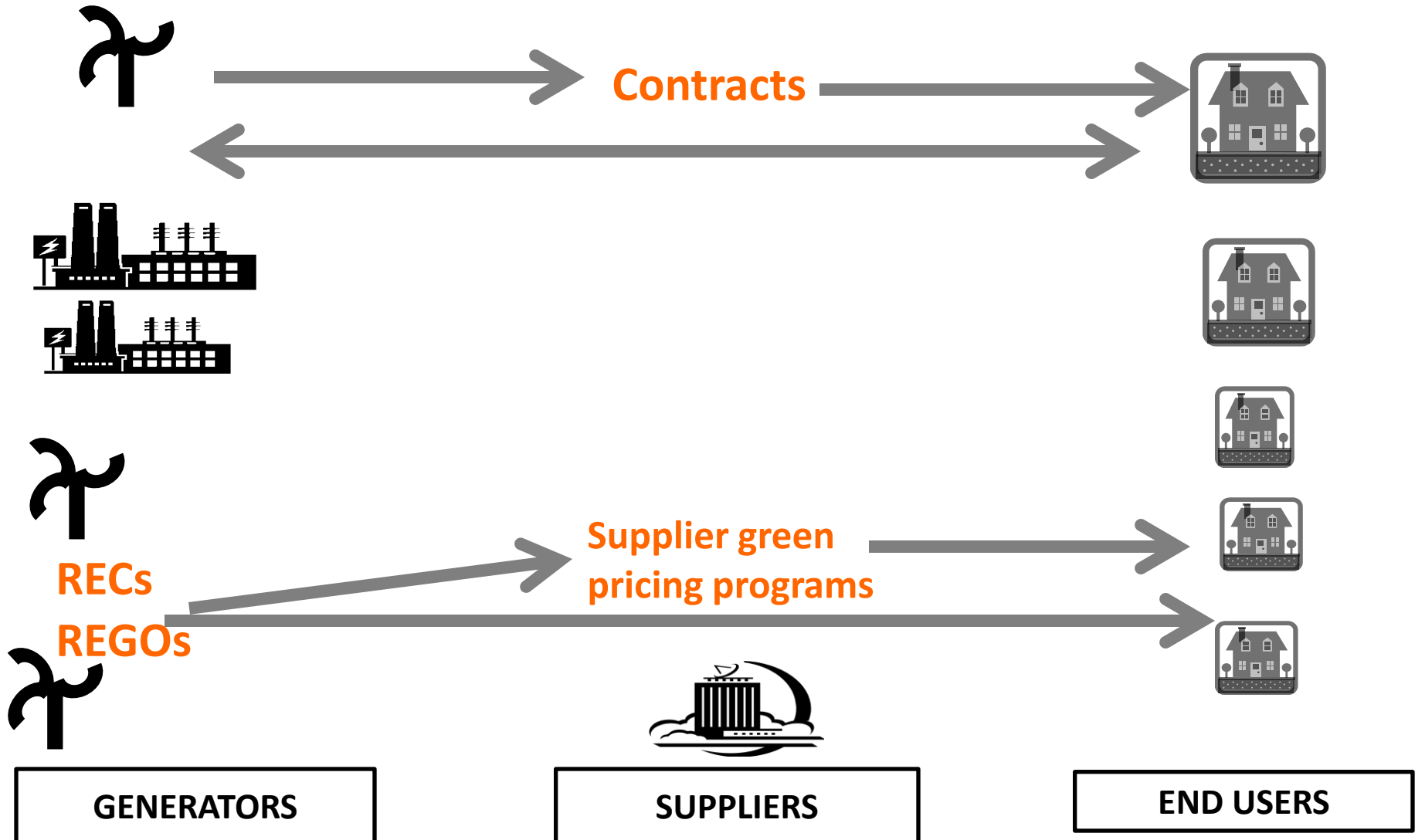
Attributes? Function?



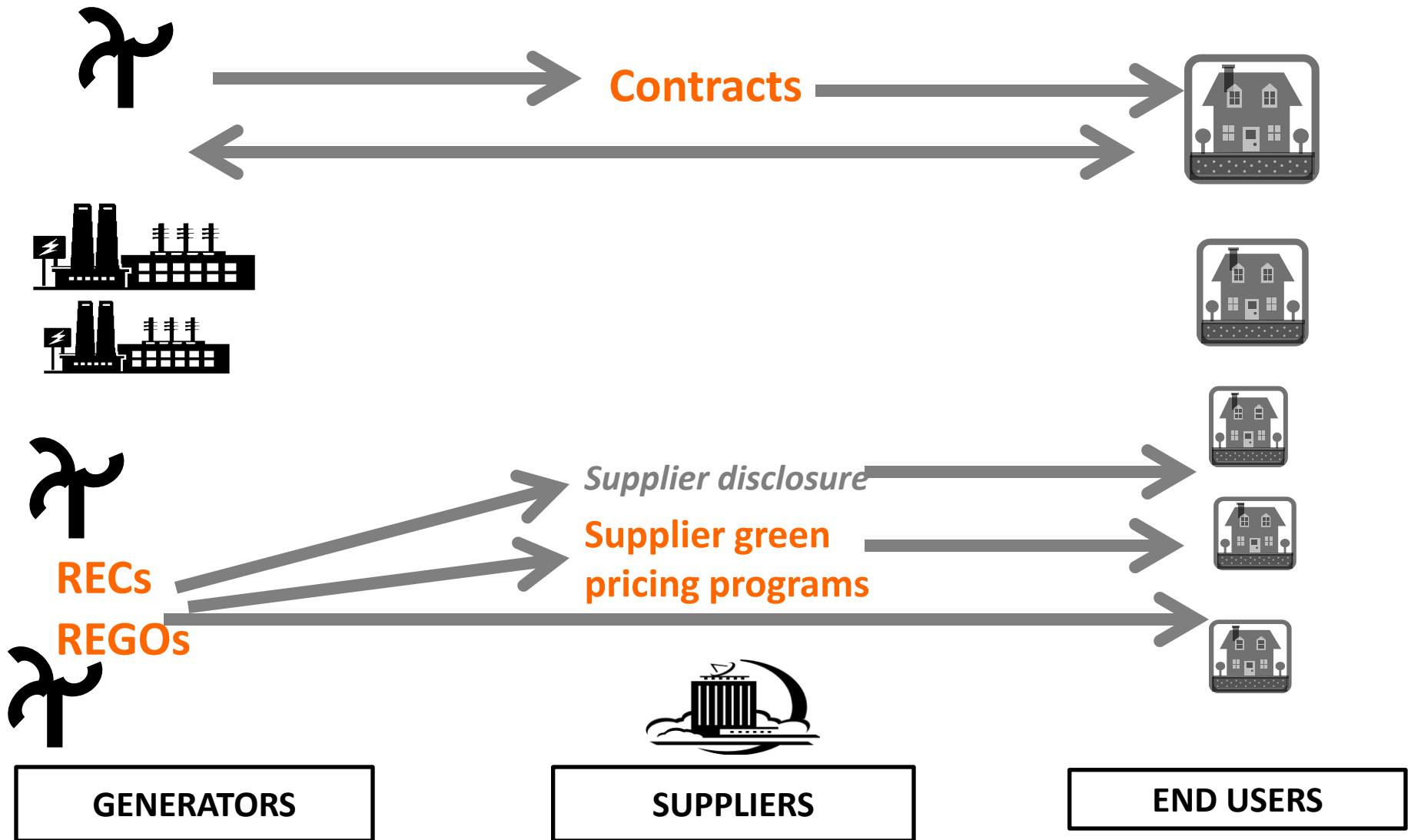
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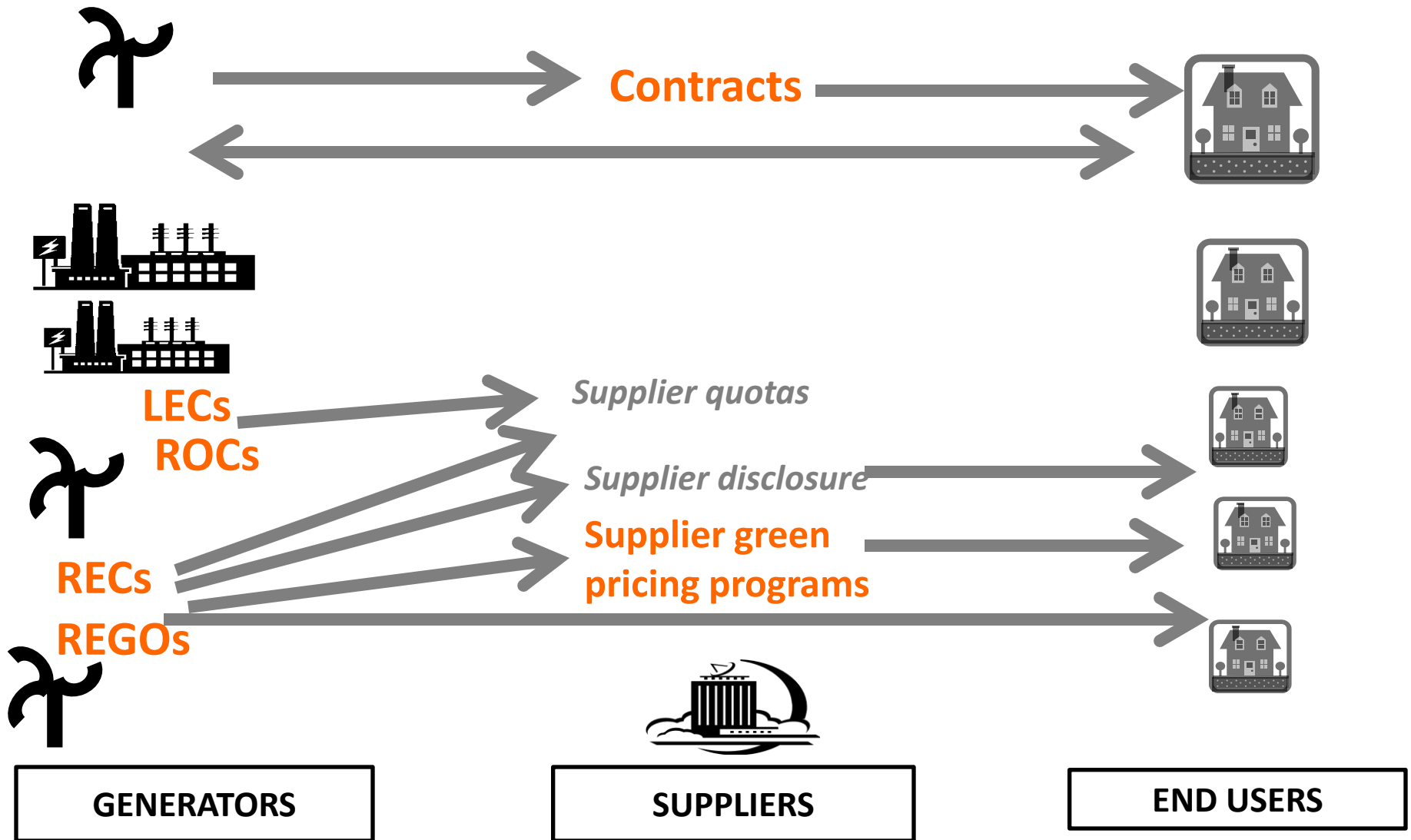
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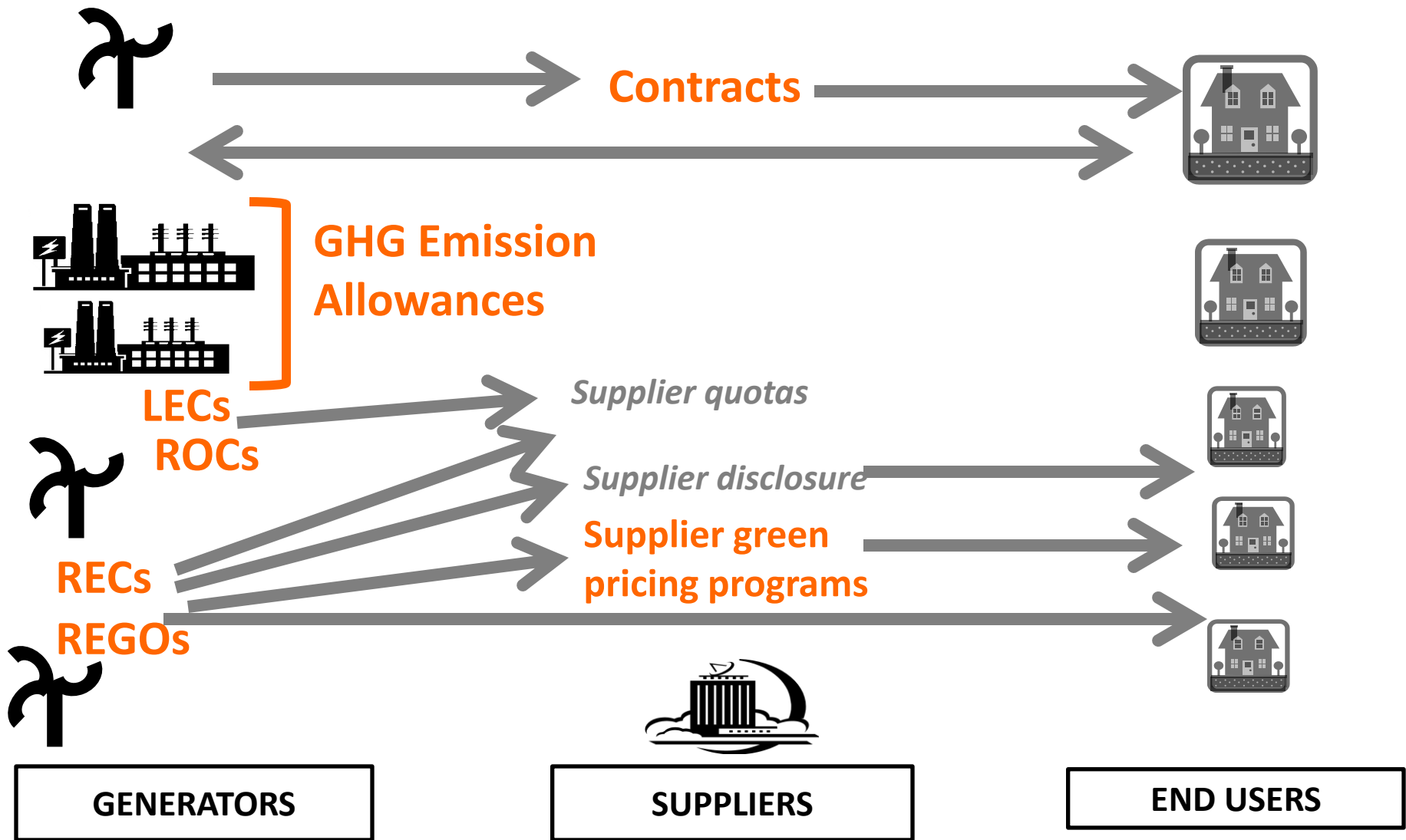


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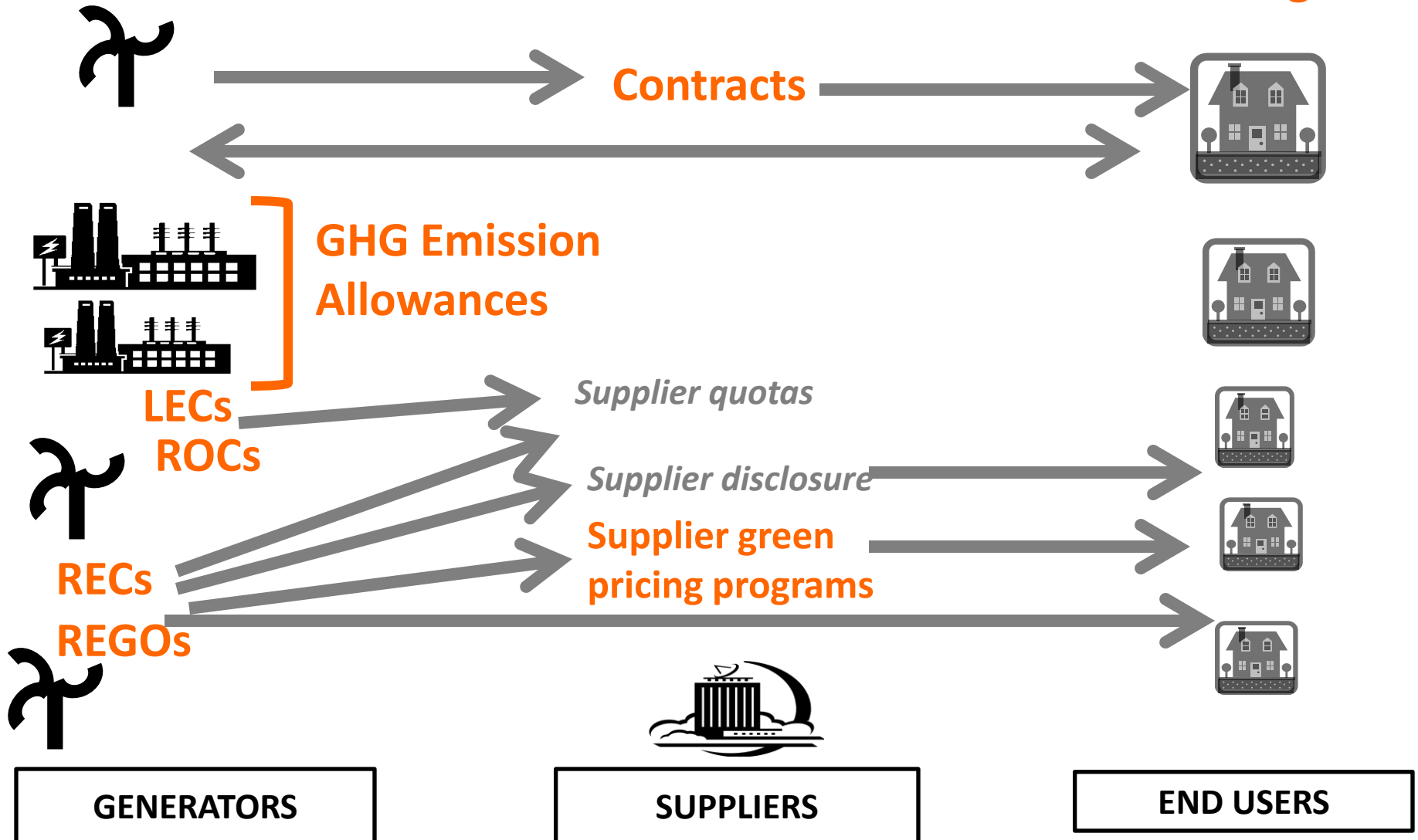
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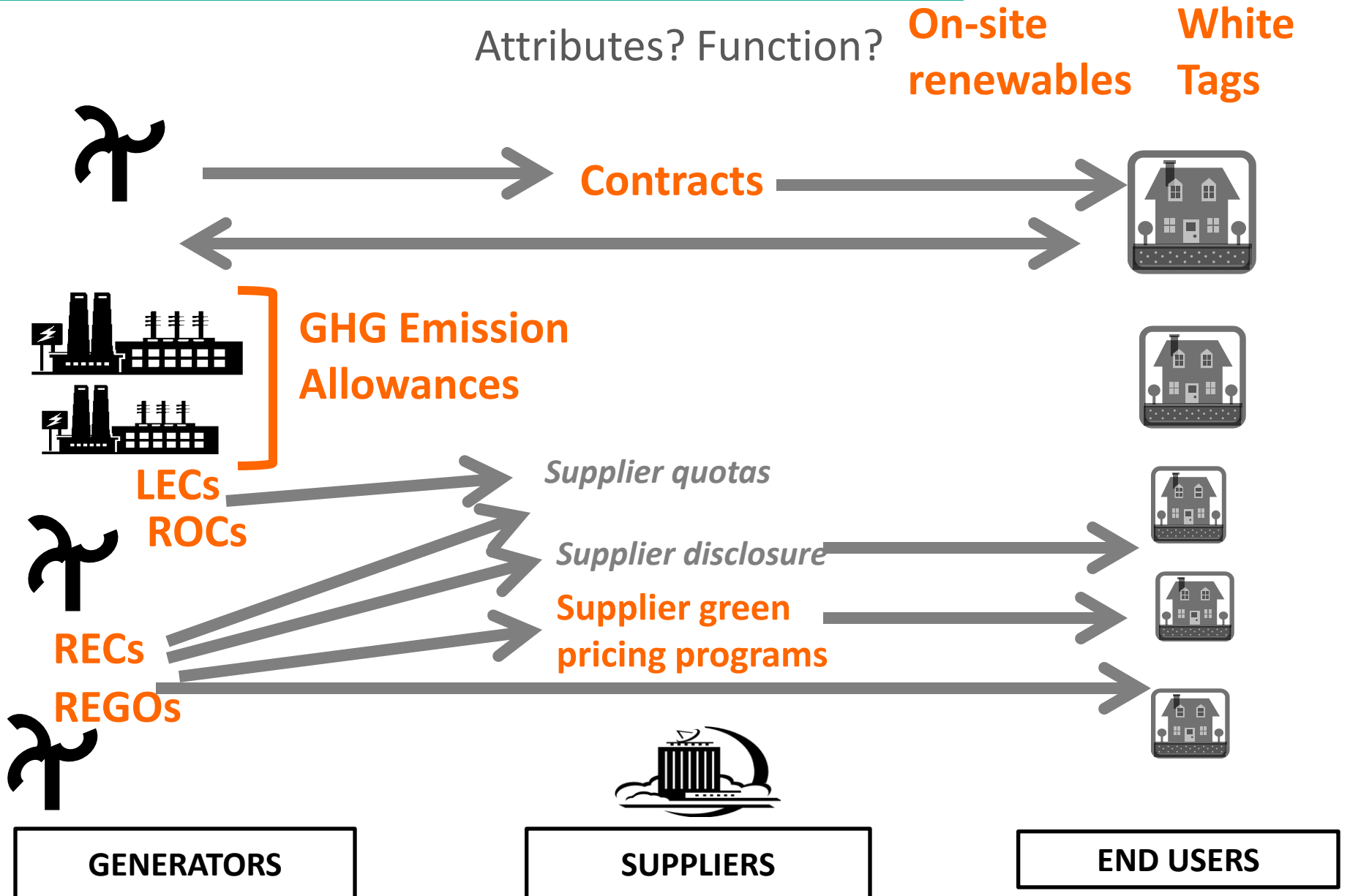


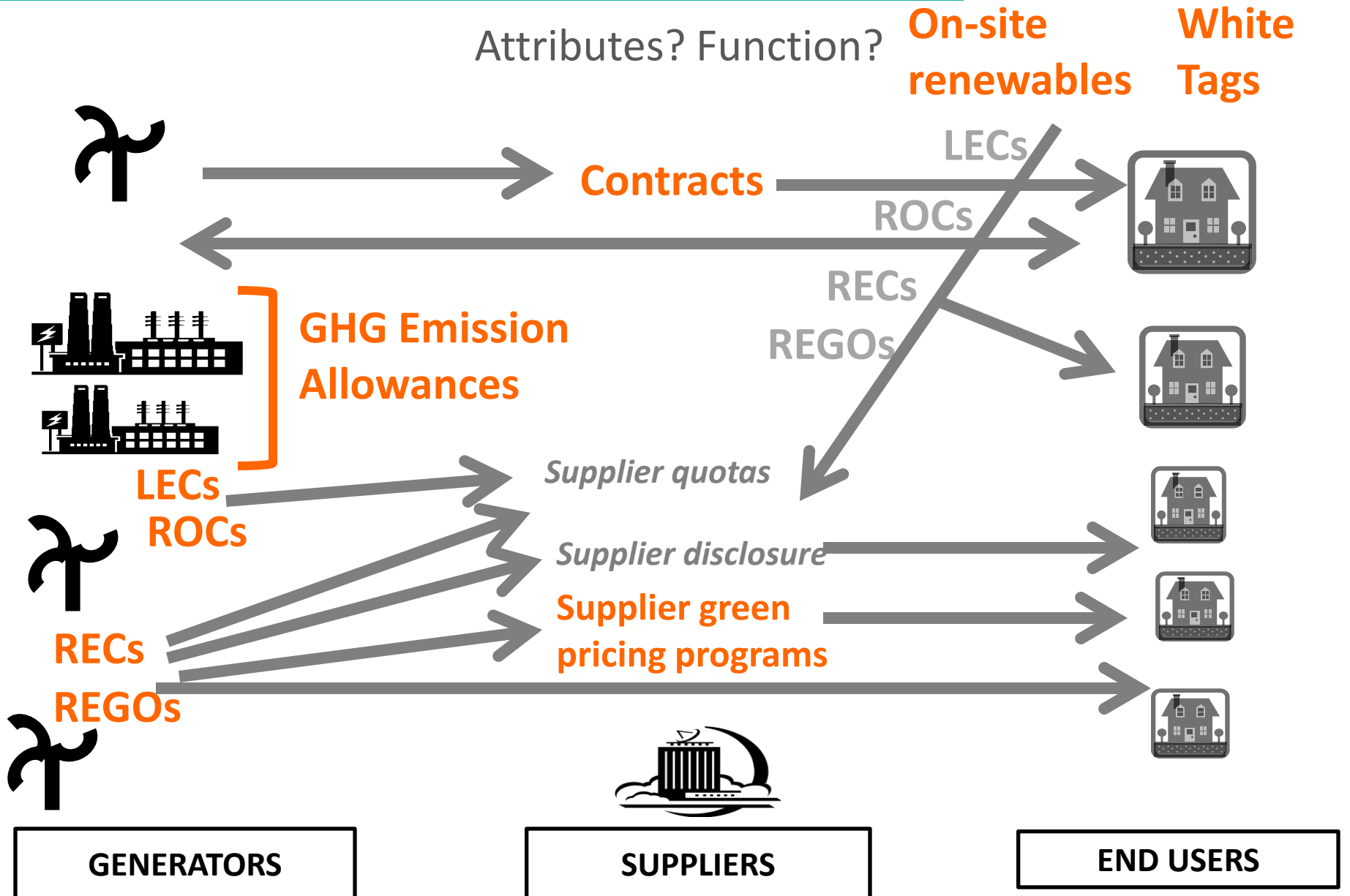


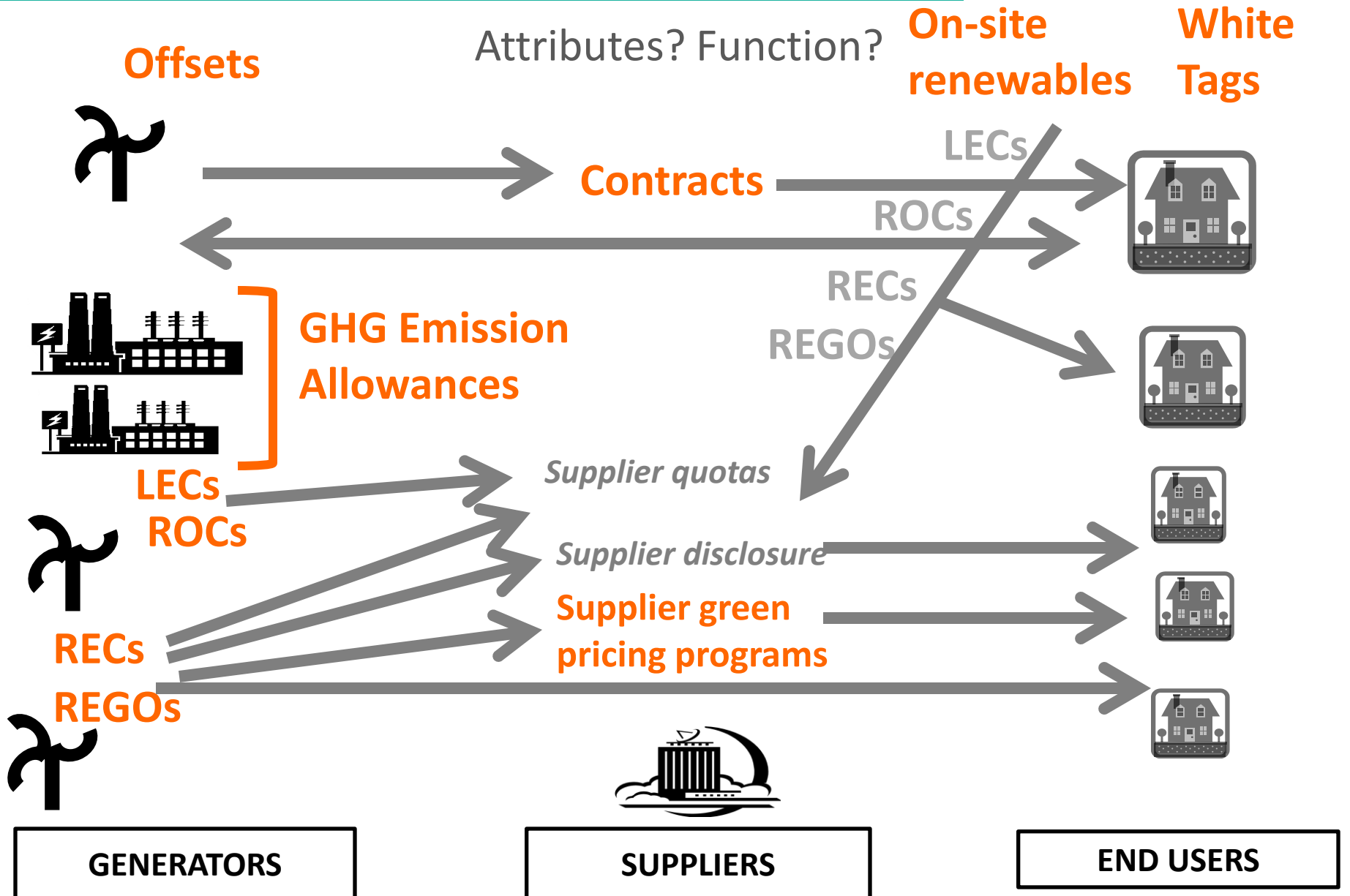
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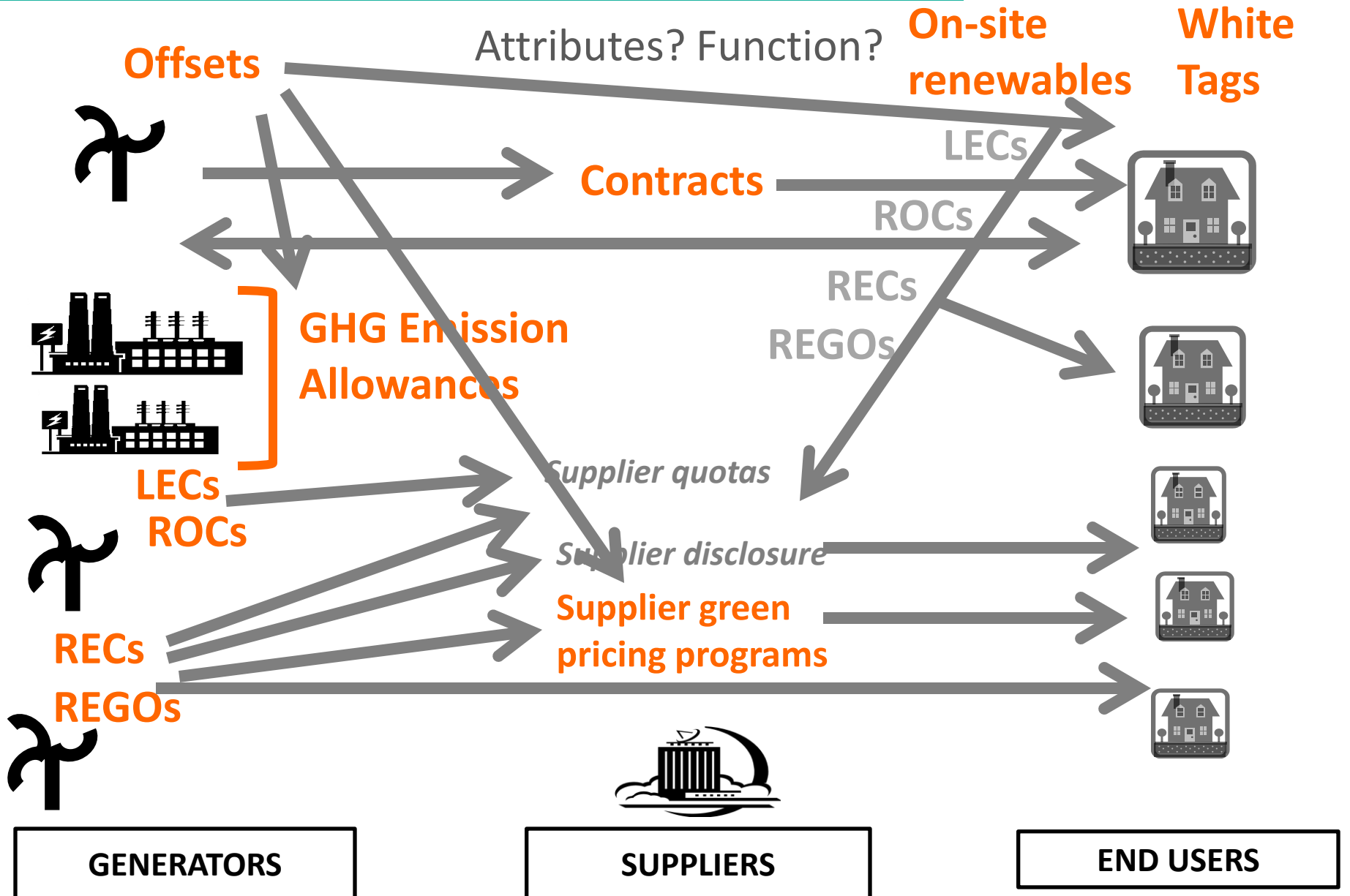
White Tags





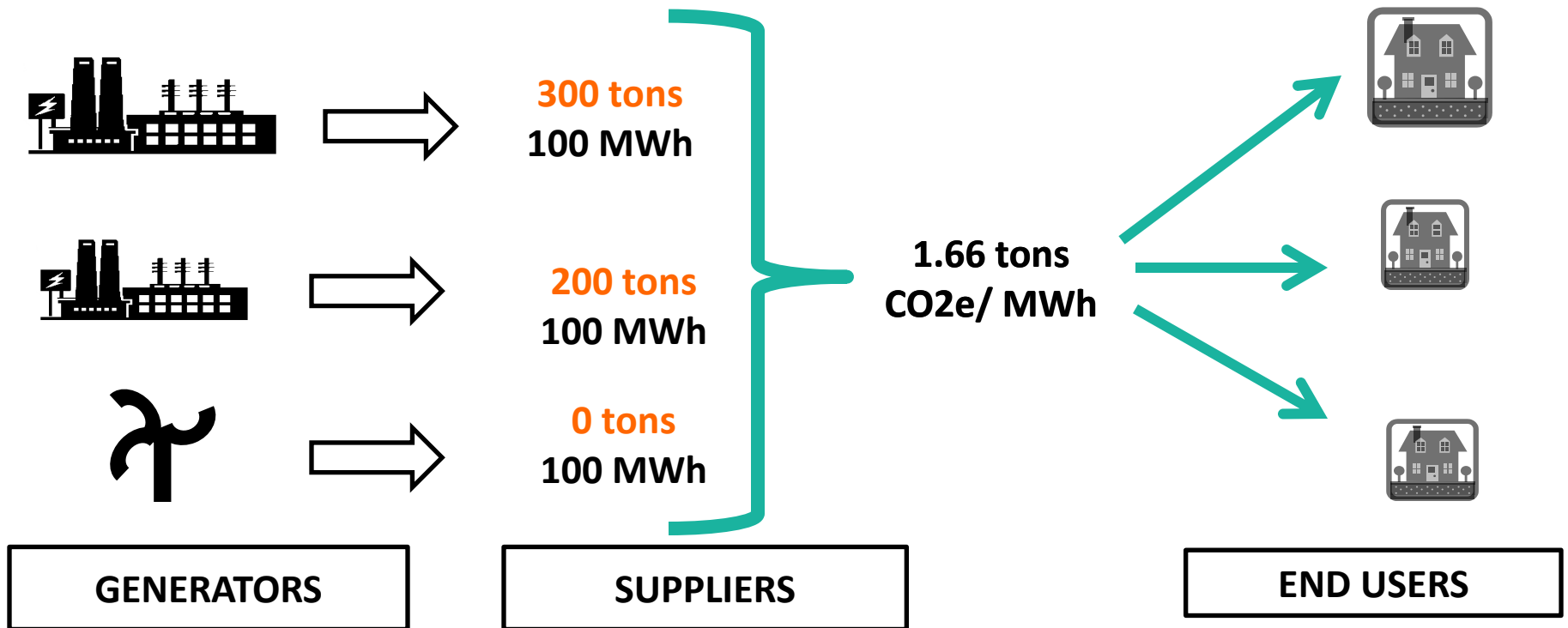




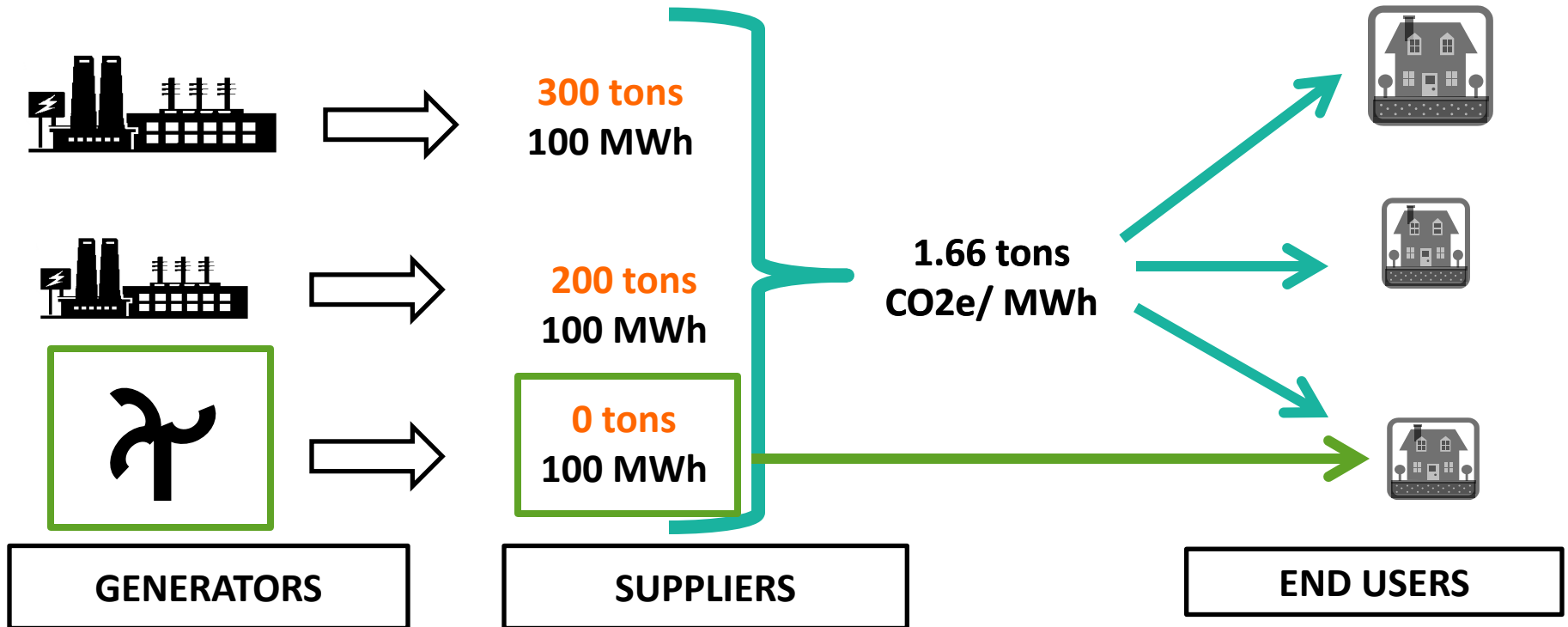


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#1. Treat RE Purchase as Alternative or “Contractual” Emission Factor



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MWh consumed x Grid Average Emission Factor = Total Scope 2

100 MWh x 1.66 tons CO₂e/MWh = 166 tons CO₂e

100 MWh RECS x 0 tons CO₂e/MWh = 0 tons CO₂e

Adjusted/Contractual Scope 2
= 0 tons CO₂e

#1. Treat RE Purchase as Alternative or “Contractual” Emission Factor

Issues:

- ❑ **What attributes and instruments needed?**
 - How verify?
- ❑ **What ownership requirements to avoid double selling and counting?**
 - Tracking and verification systems
 - Supplier disclosure / EFs
 - Grid average EFs
- ❑ **What policy implications?**
 - Cap and trade –implicit vs. explicit attribution, allowance retirement
 - Offsets in emerging economies – many protocols prohibit, but not always clear in emerging economies

#2. Treat RE Purchase as Avoided Emissions for Scope 2

MWh consumed x Grid Average Emission Factor = Total Scope 2

100 MWh x 1.66 tons CO₂e/MWh = 166 tons CO₂e

50 MWh RECS x 1.9 tons CO₂e/MWh = 95 tons CO₂e

166 - 95 = 71 tons CO₂e

**Adjusted/Contractual Scope 2
= 71 tons CO₂e**

#2. Treat RE Purchase as Avoided Emissions for Scope 2

Issues:

- ❑ **What attributes and instruments needed?**
 - How verify?
- ❑ **What ownership requirements to avoid double selling and counting?**
 - Tracking and verification systems
 - More difficult to integrate into supplier disclosure
- ❑ **What policy implications?**
 - Cap and trade → not feasible claim without allowance retirement
 - Offsets in emerging economies → not feasible claim

#3. Record Separately with No Inventory Impact

Instrument Quality

- Not transparent on what information included, or how to substantiate
- No mechanisms for verification

Consistency of Tracking/Calculation Systems

- Supplier disclosure / EFs
- Relative importance of Grid average EFs?

Unclear Role and Achievement of Additionality

Additionality: incentivizing behavior beyond what would have occurred in the absence of the incentive's “intervention”

Rationale for inclusion

- Consumers expect degrees of additionality with expectation of “making a difference,” “driving new projects,” and “going beyond regulation”
- GHG accounting is a valuable benefit of purchase, and should be ascribed to those projects which are brought about due to the incentive of the REC

Challenges

- Concerns about motivation of project distinct from the objective attribute of its emissions: question is what kind of mechanisms make distinction of whether it's available for claiming
- Degree of “direct causal impact” inherently obscure
- Execution of tests can be intensive, subjective
- Every market different, responds to different incentives
- Market/regulatory conditions change over time and what's “additional” changes

Broader concept of **eligibility**

additionality is subset

“shrinking” the pool of existing projects, shaping the profile of new

Regulatory Quota – sometimes ownership question

Financial Support – identify threshold of what level support is “enough” (Subsidies, tax credits, FiT?)

Vintage – drive new projects

Technology – specifying types to achieve enviro outcomes or spur innovation

Environmental Performance – Other impacts beyond GHG’s

Geographic Boundaries – Local economic/enviro benefits

Integration with other attributes – Maintenance of all attributes with purchased product

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International, multi-stakeholder process on GHG accounting issues of RE purchases and related instruments that fits in GHG Protocol framework

scoping workshops

*Washington DC, USA – December 2010
London, UK – January 2011
Mexico City, Mexico – May 2011*

Technical Working
Group Drafts and
Discussion

Open process, technical depth – Summer/Fall 2011

Public comment

March 2012

Publication

Summer 2012

accuracy, transparency, consistency, completeness and relevance

Minimum Criteria

- Attributes: Substantiated? Defined by regulatory or voluntary body? Other related policies which have restricted claiming?
- Ownership: registry to track the transaction? Retired once claim is made? Other instruments associated with this underlying project? Do any other instruments convey those same attributes/rights directly? Indirectly?

Reporting Options and Clarifying Explanations

- Gross/Net (still report electricity consumption)
- Optionally list other GHG impacts separately from the scopes
- *For on-site*: Quantity produced, consumed on-site, send/sold back to grid (and whether net metering applications), and have attributes been sold?
- What if instruments do not meet all criteria?
- More context on hosting a project
- Language recommendations: 'offset' and 'reductions'

accuracy, transparency, consistency, completeness and relevance

Best Practice Compendium

TRACKING SYSTEMS, EMISSION FACTORS and SUPPLIER PROGRAMS

- Importance of tracking systems; what information recorded
- Calculating supplier fuel mix disclosure and related EFs
- Common formats for transparent disclosure and related claims

POLICY CONSIDERATIONS FOR RE PURCHASING MECHANISMS

- Survey criteria added to different electricity labels, programs and certified RE products in prominent markets, identifying rationale/intended objectives
- Environmental impacts beyond GHG's for energy purchasing
- Economic considerations

Not normative, but hopefully resource for considering impacts and relationships between products and market outcomes

Materials to date and summaries of scoping workshops available on project website:

<http://www.ghgprotocol.org/feature/ghg-protocol-power-accounting-guidelines>

Contact: Mary Sotos
mary.sotos@wri.org
202-729 7627