

Reliable Disclosure Systems for Europe (RE-DISS)

Project Summary Slides

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Contract No. IEE/09/761/SI2.558253

www.reliable-disclosure.org



What has happened before RE-DISS?

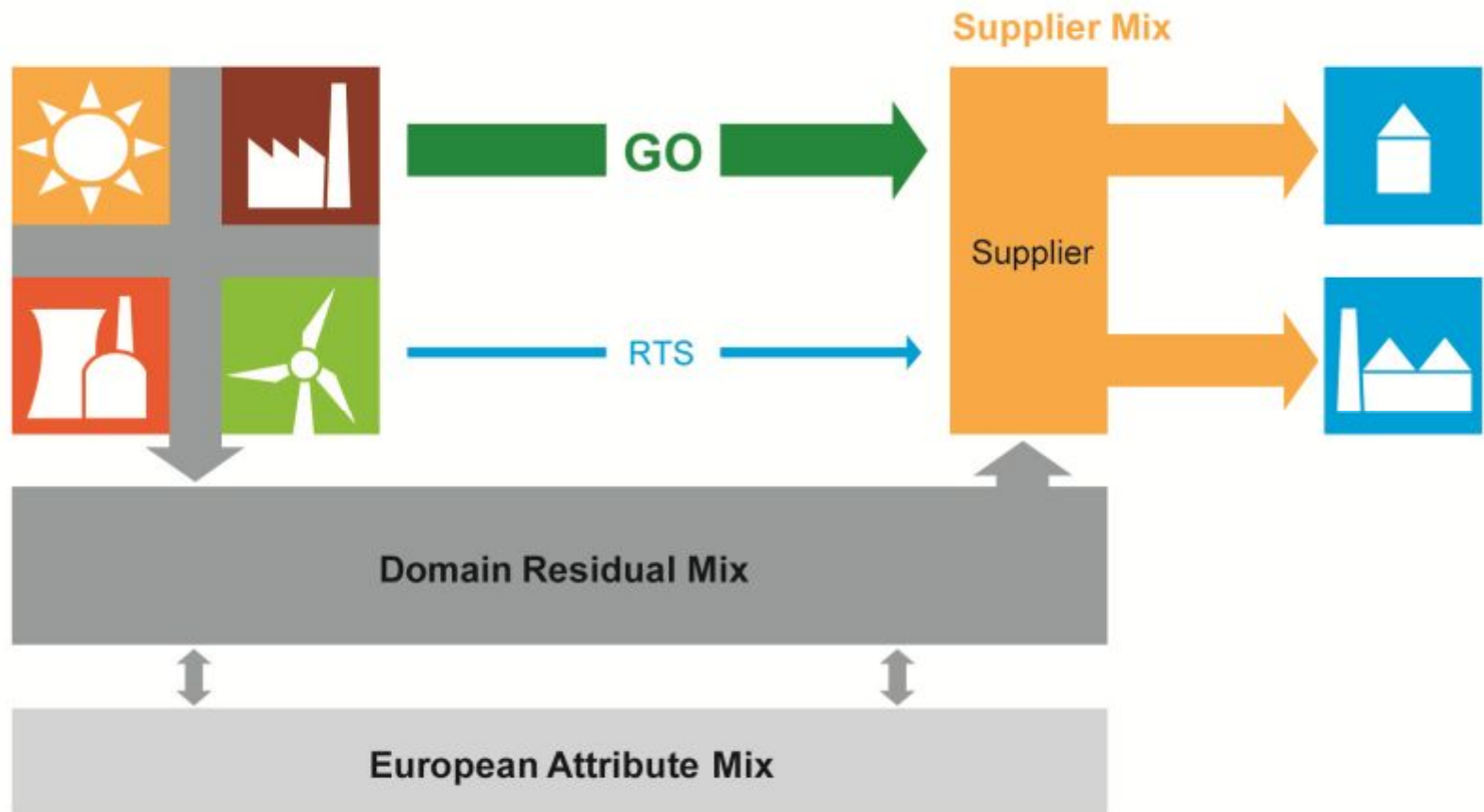
- Liberalisation in electricity market and a growing green power market in Europe
- Electricity disclosure and Guarantees of Origin (GO) introduced by EU Directives
- COM issued recommendations to Member States regarding the implementation of disclosure (2004)
- AIB established the European Energy Certificate System
- E-TRACK I analysed the “tracking” requirements of disclosure
 - Recommendation for national/regional tracking systems
- E-TRACK II assessed GO and disclosure in Europe and gave more detailed recommendations on European cooperation in tracking systems
- New RES Directive clarified definition and role of RES-GO.
- Pilot activity of the European Platform Electricity Disclosure (EPED)

GO currently coexist with a lot of competitors

	Legal Basis in EU Directive	Usage by market actors	Applicable to		
			RES-E	HE-CHP-E	other generation
Guarantees of Origin for RES-E	(2001/77/EC) 2009/28/EC	optional	X		
Guarantees of Origin for HE-CHP-E	2004/8/EC	optional	(X)	X	
RECS certificates	(none)	optional	X		
Disclosure certificates	(2003/54/EC) 2009/72/EC	optional	(X)	X	X
National calculation schemes for electricity disclosure	(2003/54/EC) 2009/72/EC	optional (mandatory)	X	X	X
Green Power Quality Labels	(none)	optional	X	(X)	

Source: E-TRACK II Final Report

E-TRACK recommendation for tracking systems

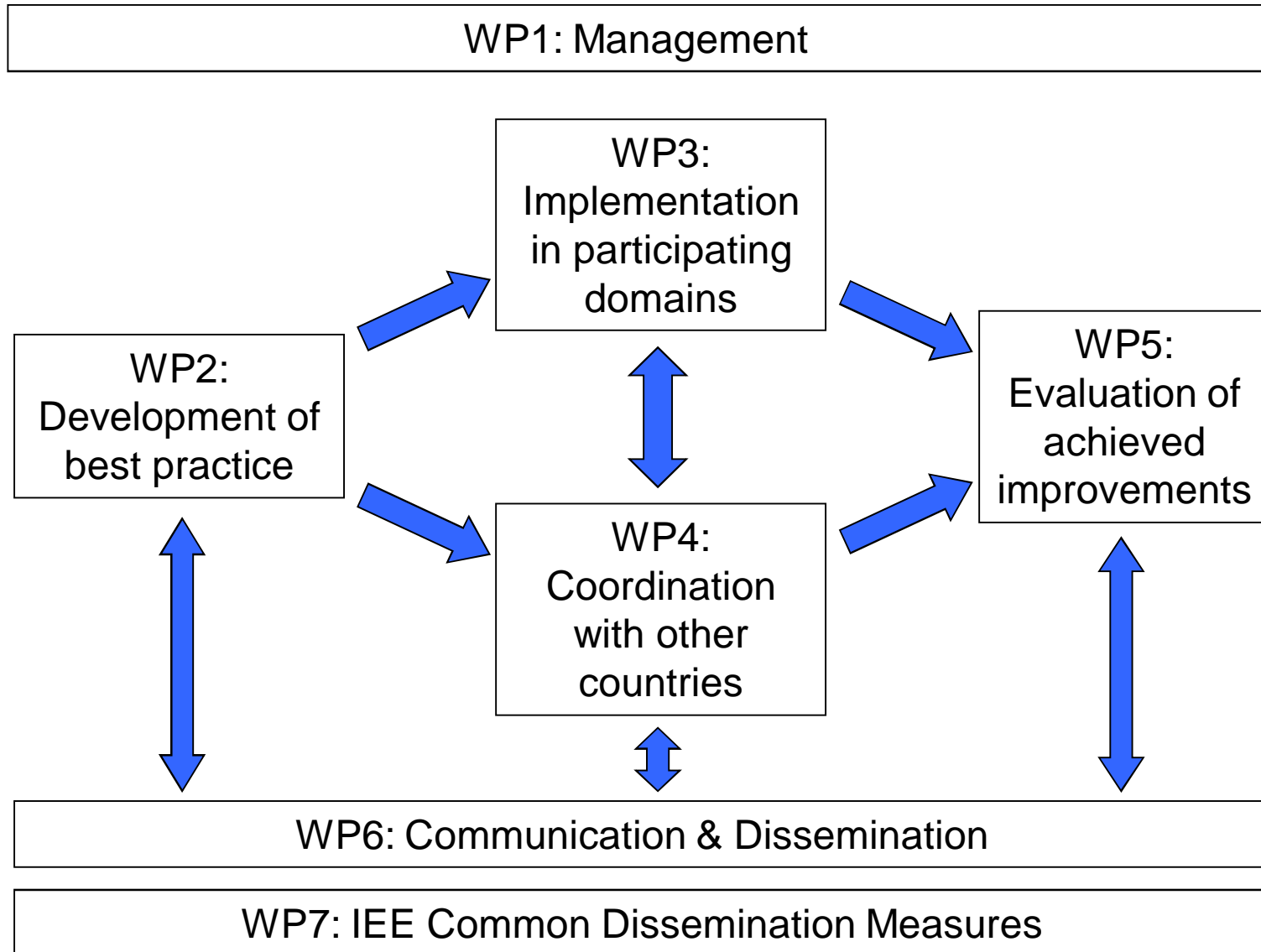


Source: E-TRACK II Final Report

RE-DISS Project Objectives

- To support Competent Bodies across Europe in exchanging experience in implementing GOs and disclosure.
- To identify potentials for improvements in current tracking systems and demand for cooperation across borders.
- To support a group of participating domains in actual improvements of their (advanced) GO and disclosure systems.
- To agree on Best Practice Recommendations for tracking systems which can be applied across Europe and to promote this recommendation in other European countries.
- To support “basic implementer countries” in improving their GO and disclosure systems to the minimum standards of Directives.

Project Structure



Categories of disclosure errors identified

1. Double counting in different explicit tracking instruments
2. Double counting of attributes in implicit tracking mechanisms
3. Double counting within individual supplier's portfolio
4. Loss of disclosure information, intransparency for consumers
5. Leakage of attributes and/or arbitrage
6. Unintended market barriers

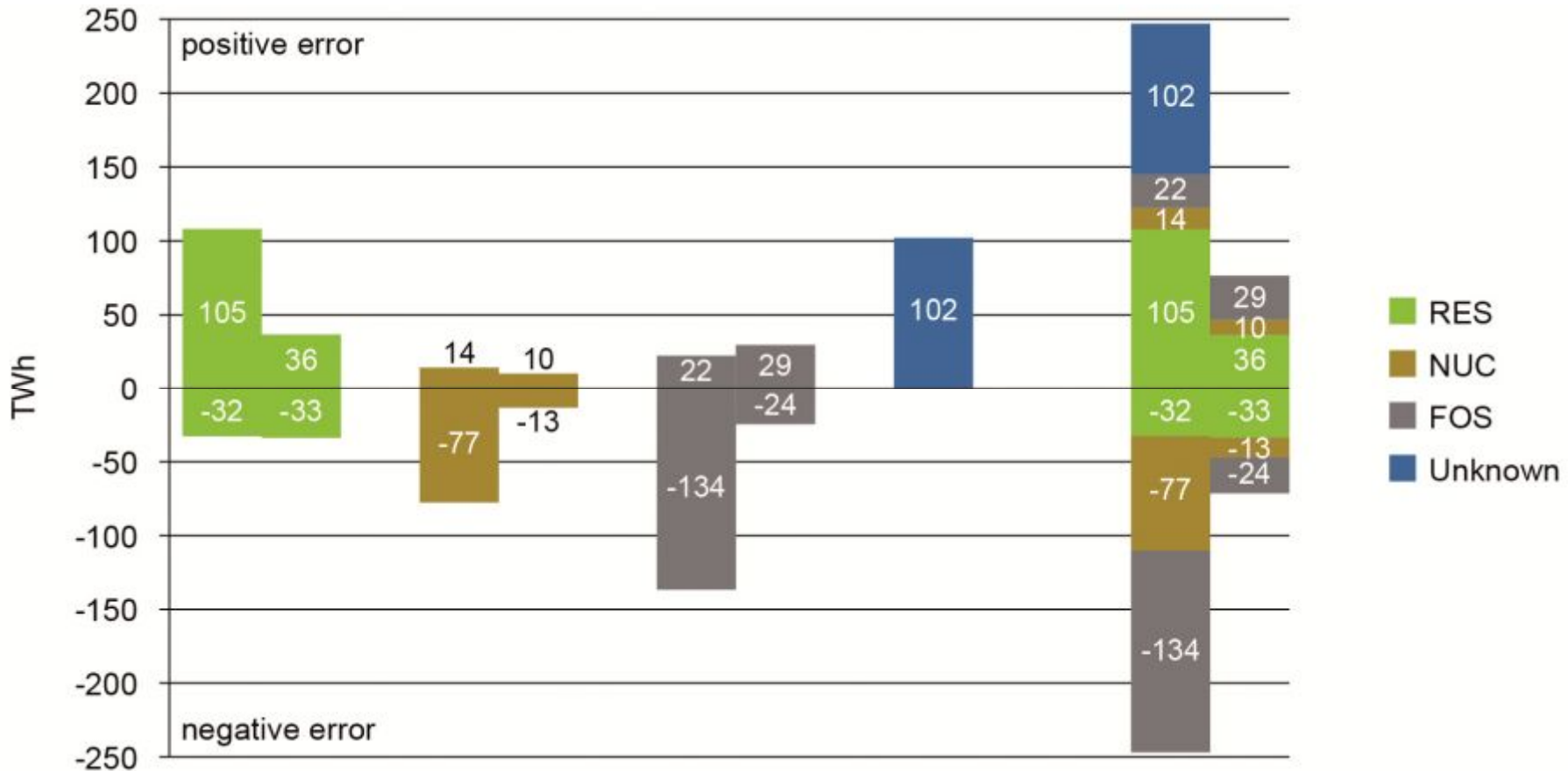
The concept of measuring implicit disclosure errors

- The actual improvements of GO and disclosure systems in different countries is evaluated based on the reduction in the disclosure error.
- The “disclosure error” is being quantified by comparing
 - an ideal case where
 - all attributes are disclosed once to consumers, and
 - the allocation reflects transfers, cancellation and expiry of GOs, as well as other reliable tracking mechanisms,
 with
 - the real figures used for disclosure in the respective countries.

An estimate of the disclosure errors in 2009 / 2012

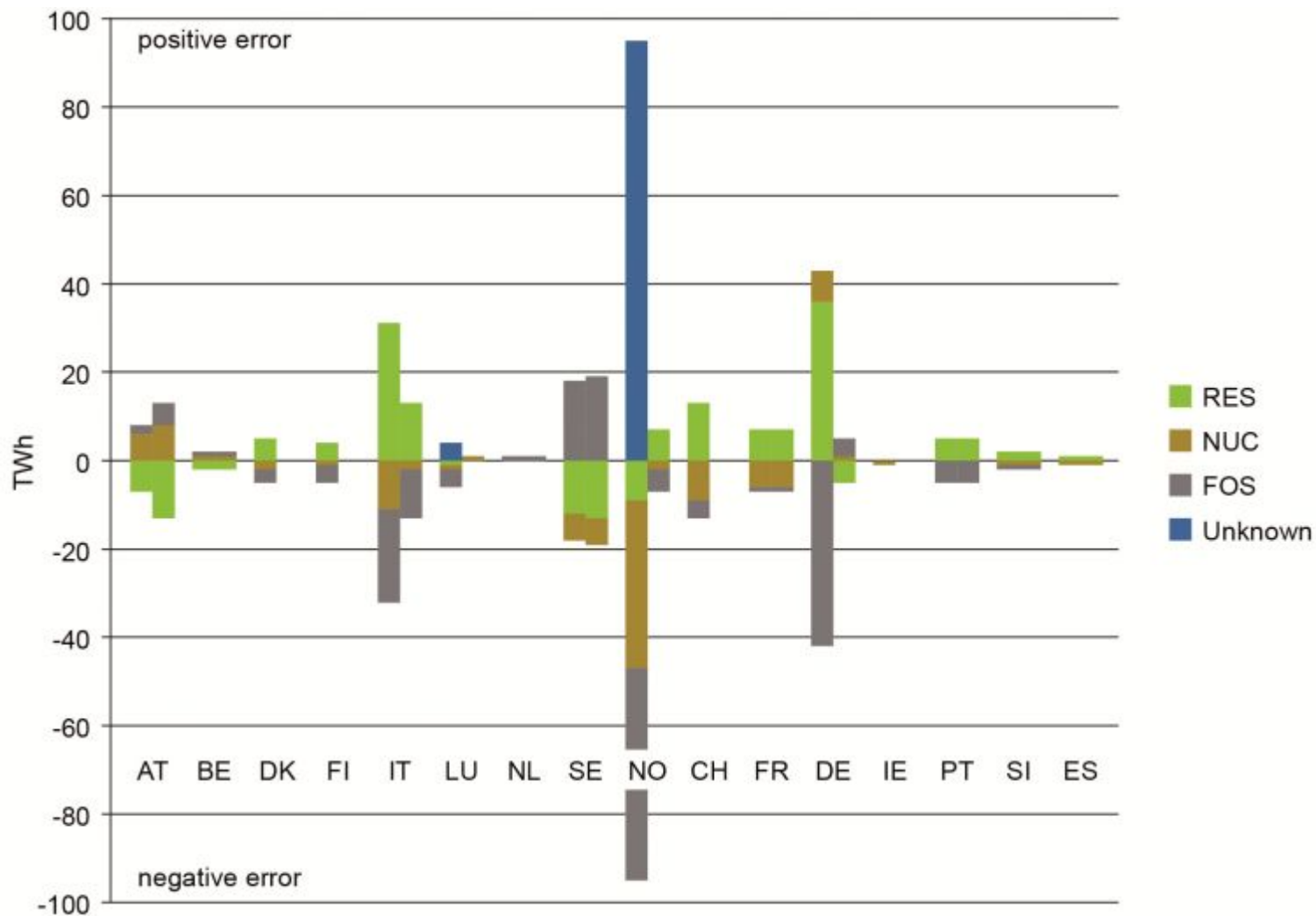
- In the year 2009 in the total of Europe,
 - ~ 240 TWh of electricity were disclosed wrongly, of which
 - ~ 100 TWh of RES-E were double counted (approx. 14% of RES generation in EU27), and
 - ~ 30 TWh of other RES-E were not disclosed
- Corresponding volumes of fossil and nuclear energy were also not disclosed correctly.
- Accordingly, disclosed values for CO2 emissions and radioactive waste generation were often too low.
- The biggest errors occurred in: NO, DE, IT, SE, CH.
- Through improvements of the GO and disclosure systems the measurable disclosure error was reduced to ~75 TWh/a in 2012, but there is still a need for further harmonisation.

Total Implicit Disclosure Error Decreased by 167TWh/a



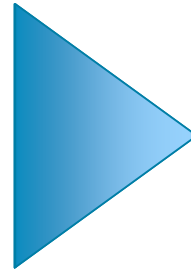
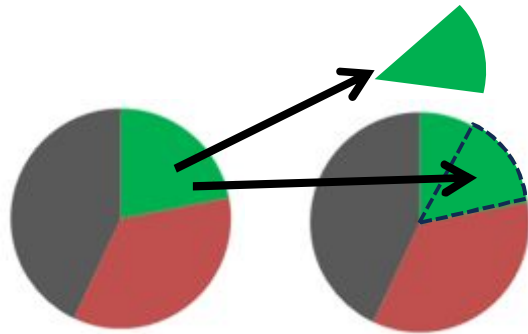
Implicit disclosure error before RE-DISS (left) and after RE-DISS (right)
RE-DISS PDs + FR, IE, DE, PT, SI

Implicit disclosure error with practices (TWh) before RE-DISS (left) and after RE-DISS (right)



Residual Mix is the Balancing System of Energy Attributes in Reliable Disclosure Systems

- Why have a GO system, if more green attributes in consumption than generation?
 - When a GO is cancelled, a production attribute should vanish from the mix (like money in accounts).



UNRELIABLE DISCLOSURE
NO VALUE FOR GOS

- “Member States shall ensure that the same unit of energy from renewable sources is taken into account only once.” (2009/28/EC, Art 15, Par 2)
- Reliable Disclosure is empowering consumers to have a say and affect on how electricity is produced

Methodology for the Calculation of National Residual Mixes

- Step 1: Preliminary residual mix in a Domain
- Step 2: Determination of Attribute Surplus / Deficit
- Step 3: Exchange with the European Attribute Mix
- Step 4: Final residual mix for the Domain

The implementation follows a pragmatic approach

Step 1: Preliminary Residual Mix in a Domain

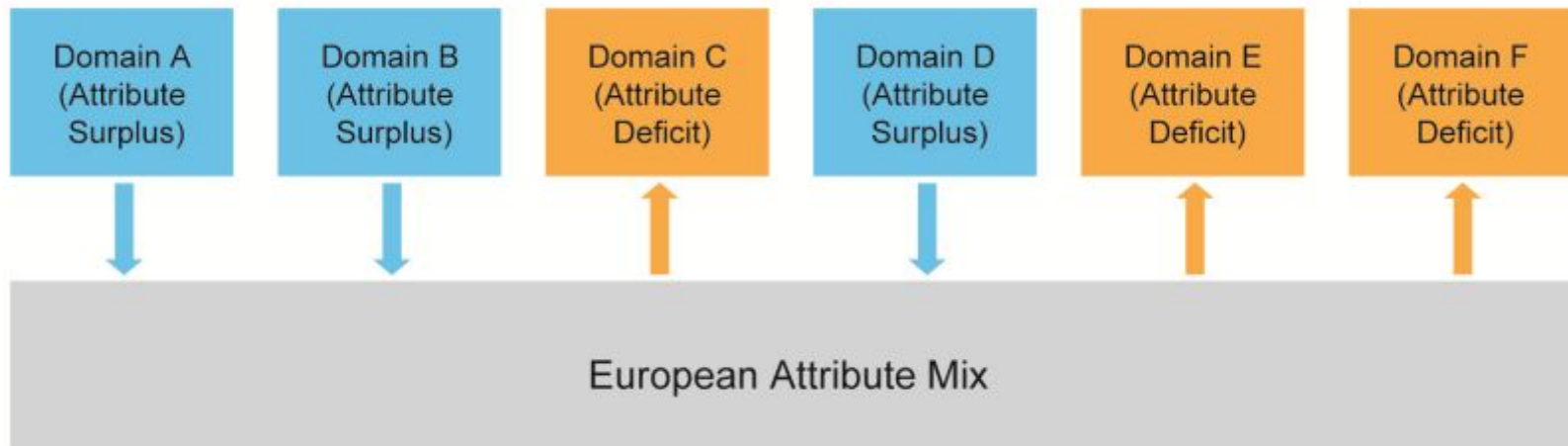
- Starting Point: Net Generation Statistics in a Domain (excluding pumped hydro)
- Corrections:
 - Add attributes of GO which have been imported
 - Subtract attributes of cancelled GO
 - Subtract attributes of exported GO
 - Subtract attributes already allocated by other (reliable) tracking mechanisms
- Result: Preliminary Residual Mix in the Domain

Step 2: Determination of Attribute Surplus / Deficit

- Compare
 - Final consumption of electricity in the Domain
 (including network losses)
 - Volume of attributes available for disclosure
 - Volume of net generation in the Domain
 - + Volume of Attributes imported, e.g. based on GO
 - Volume of Attributes exported, e.g. based on GO

 - = Volume of attributes available for disclosure
- Deficit: Consumption is higher than the attributes available
- Surplus: Consumption is lower than the attributes available

Step 3: Exchange with the European Attribute Mix



- The European Attribute Mix is filled from the preliminary Residual Mixes of the Domains which have a surplus in attributes.
- The European Attribute Mix is used to fill up the Residual Mixes of the Domains which have a deficit in attributes.

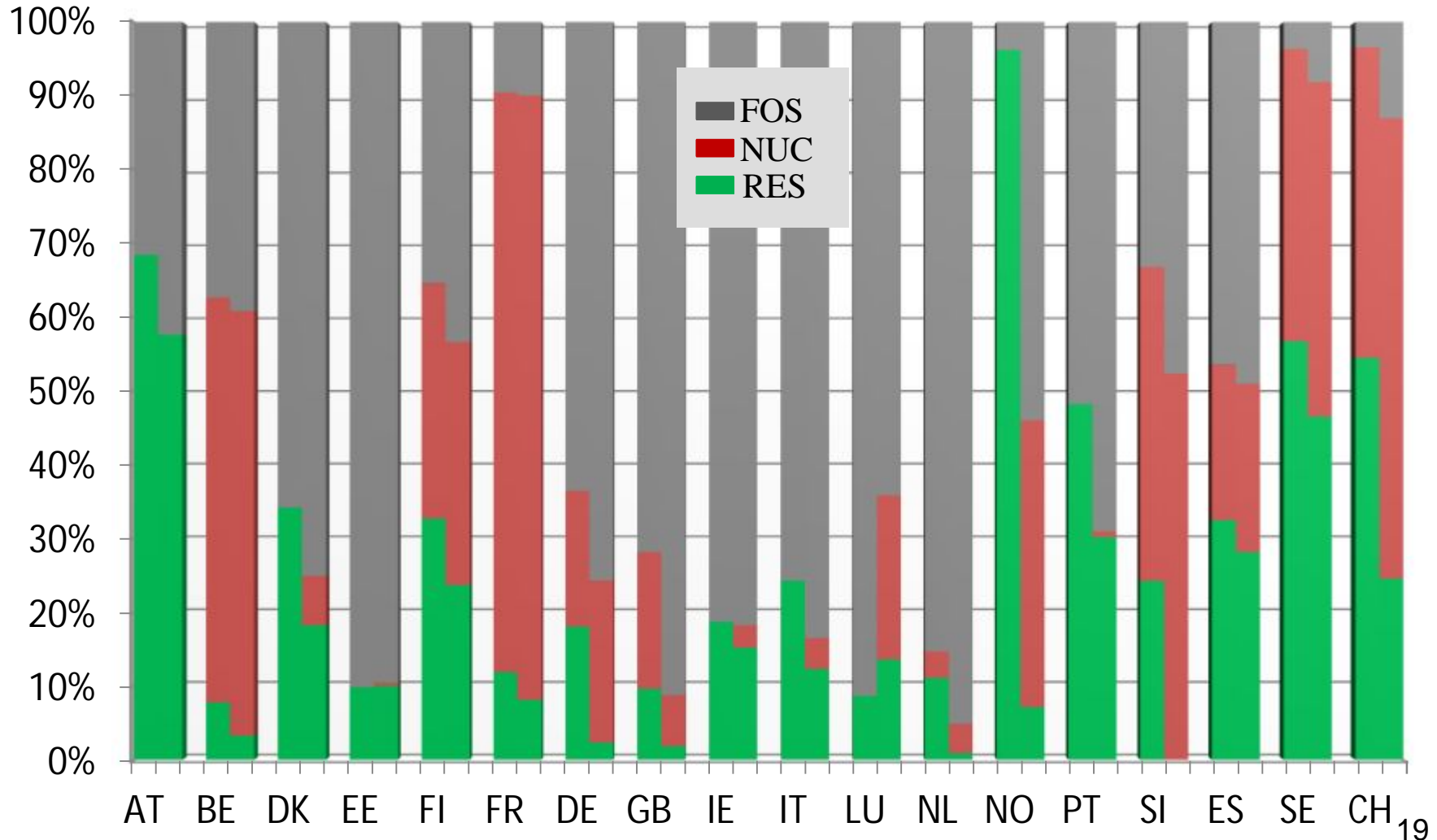
Step 4: Final Residual Mix for the Domain

- If the Domain had a **surplus of attributes**, then
 - the final Residual Mix is the same as the preliminary Residual Mix,
 - but its volume is reduced according to the final consumption in the Domain.
- If the Domain had a **deficit in attributes**, then
 - the preliminary Residual Mix and the inflow from the European (or Regional) Attribute Mix are merged to the final Residual Mix in the Domain.

Attributes to (+) and from (-) the European Attribute Mix in Residual Mix calculations 2011



2011 Production Mix (Left) vs Residual Mix (Right)



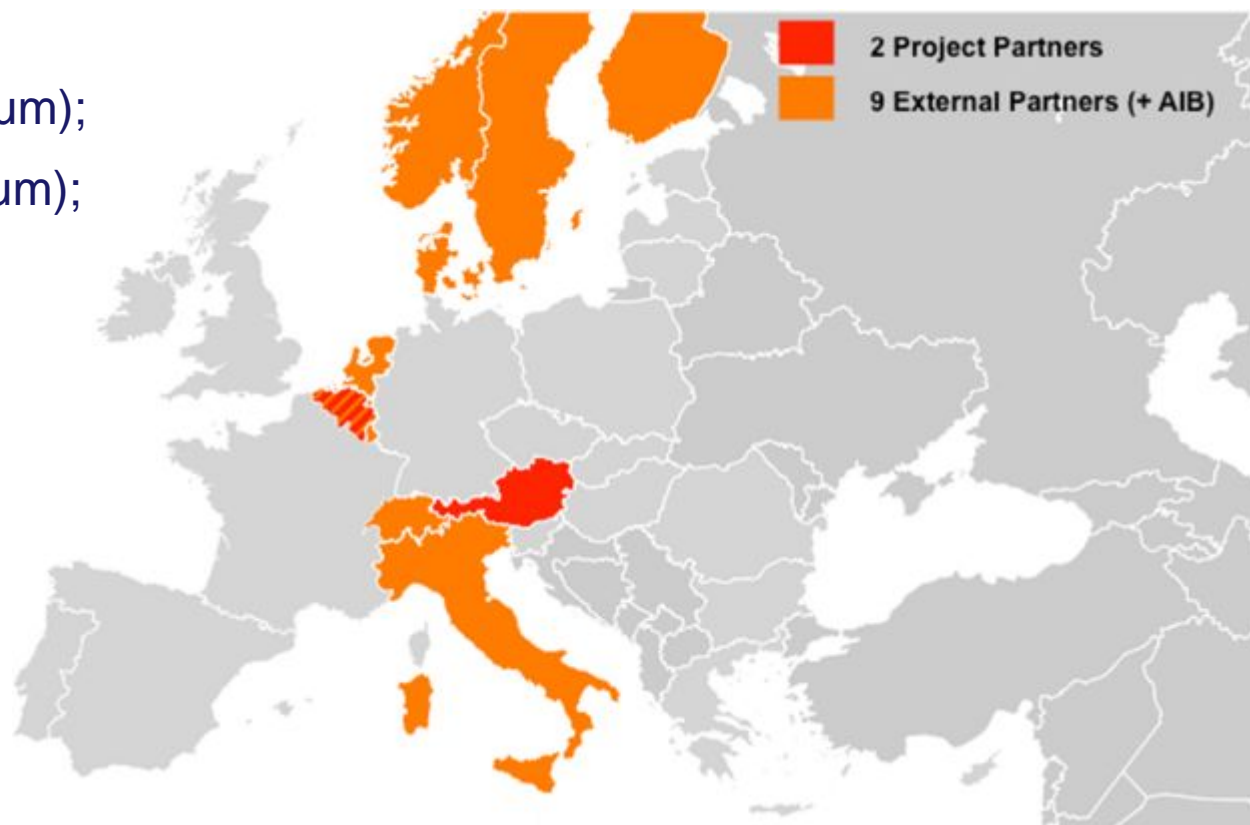
The elements of the Best Practice Recommendations

- How to implement the 12 month lifetime rule for GO
- Further recommendations on GO
 - Usage of the European Energy Certificate System
 - GO for different energy sources and technologies
 - GO as the unique “tracking certificate”
 - Recognition of GO imported from other countries
- Disclosure Schemes and other Reliable Tracking Systems
- Calculation procedures for Residual Mixes
- Contract based tracking
- Timing of Disclosure
- Further Recommendations on Disclosure
- Steps for determining the disclosure figures of a supplier

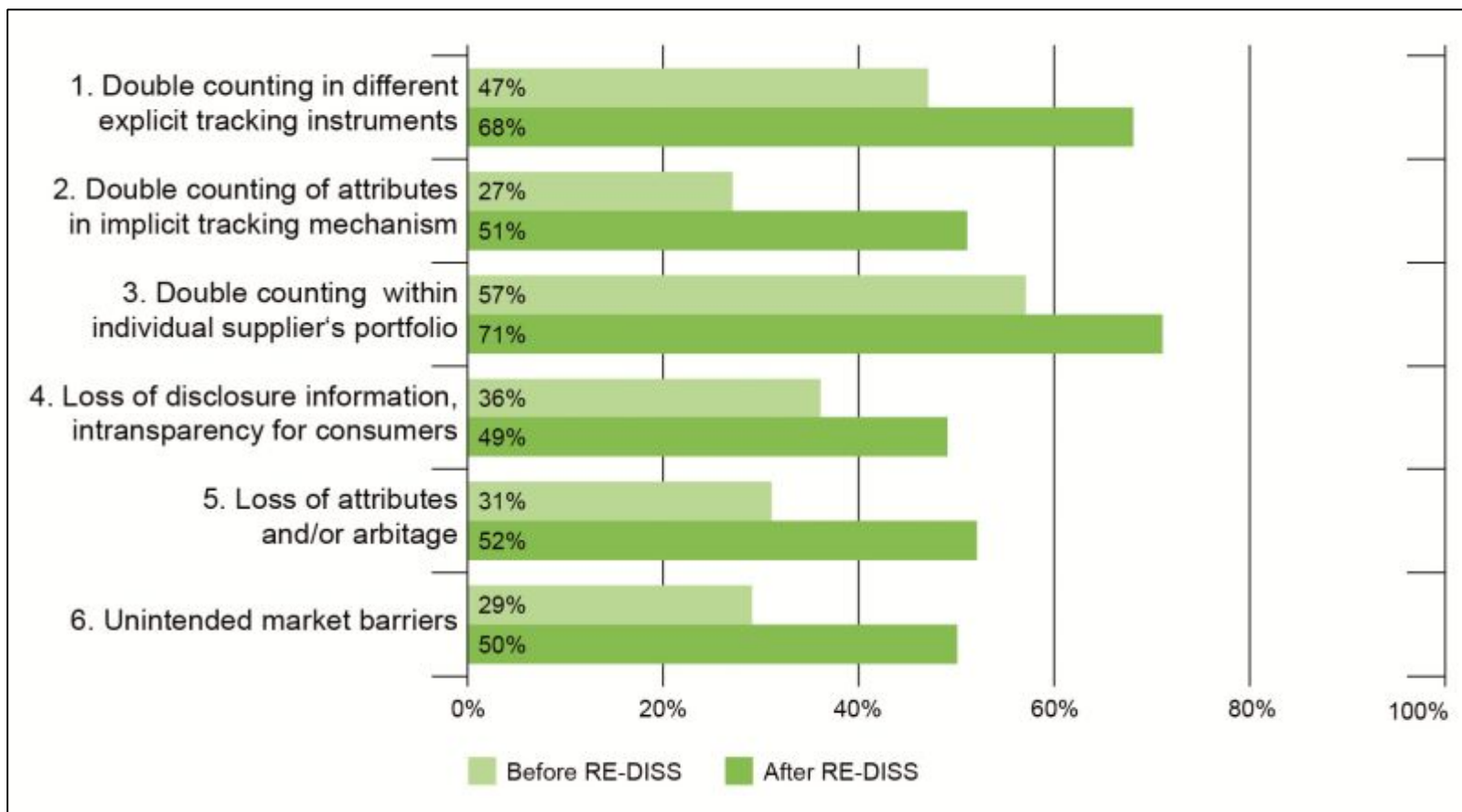
RE-DISS Partner Countries

A total of 11 Partner Countries (Project Partners & External Partners) have been recruited through the project

1. Austria;
2. Flanders (Belgium);
3. Wallonia (Belgium);
4. Denmark;
5. Finland;
6. Italy;
7. Luxemburg;
8. Netherland;
9. Norway;
10. Sweden; and
11. Switzerland



Actual improvements registered in 17 domains in addressing the main disclosure problems during the RE-DISS project



Conclusions

- Electricity disclosure can be a powerful tool to support consumer choice in a European electricity market.
- European legislation has defined RES-GO in a sufficient level of detail, whereas GO for other types of generation and overall rules for disclosure are only weakly regulated.
- Cross-border harmonisation of tracking systems is a key requirement in order to supplement the European internal market for electricity.
- Based on the results of the E-TRACK project, the RE-DISS project is giving detailed guidance of how European regulations should be implemented in order to create a level playing field not only for electrons, but also for attributes.

Project partners and schedule

Project partners

Oeko-Institut (DE) (Coordinator)

Energie-Control Austria (AT)

Grexel Systems (FI)

IT Power (GB)

Observatoire des énergies renouvelables (FR)

Flemish Regulatory Agency for the electricity and gas market (BE)

Project milestones

05/2010 Establishment of a first group of Competent Bodies

12/2010 Agreement of a best practice recommendation

06/2012 Completion of national implementation phase

09/2012 Assessment of the improvements achieved

09/2012 Proposal for Commission Guidelines on electricity disclosure

12/2012 Close of project, negotiations about a RE-DISS II project

Further Information

RE-DISS project website

www.reliable-disclosure.org

E-TRACK project website

www.e-track-project.org

Website of the European Platform Electricity Disclosure

www.eped.eu

Website of the European Energy Certificate System

www.aib-net.org

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