EU Taxonomy Explored: Electricity & Energy

Energy Community Secretariat – online workshop

30 September 2021

Agenda

Part I

- Introduction
- EU Taxonomy Explored: Electricity & Energy

Part II

- Implementation EU Taxonomy (Art. 8) in OMV

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The EU Taxonomy is a classification system for sustainable economic activities to align financial flows with EU climate objectives and prevent greenwashing

Background

Sustainable Finance → channeling private investment into the transition to a climate neutral, climate resilient, resource-efficient and fair economy, as a complement to public money

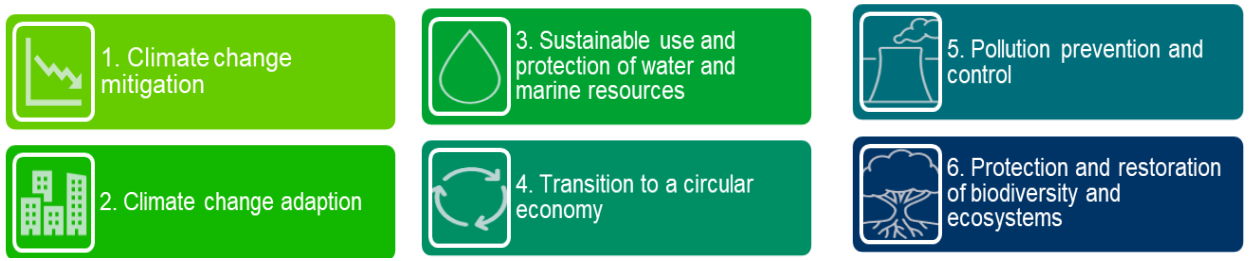
How

- **Clear criteria** to companies, investors and policymakers which economic activities are **environmentally sustainable**
- Requires financial market participants & companies to **report environmentally sustainable financial KPIs**

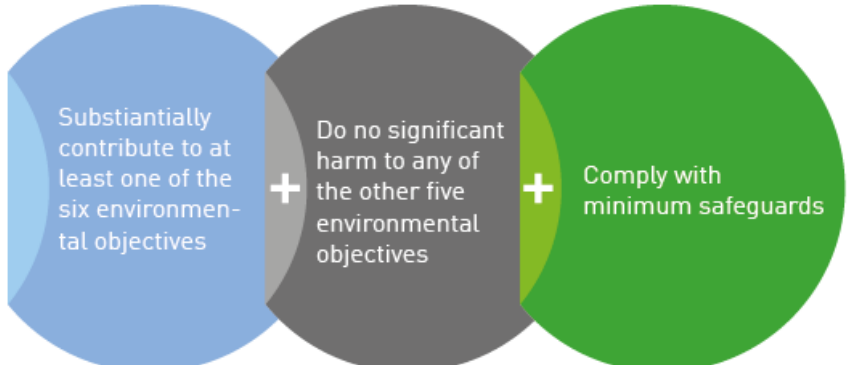
Impact

- Defining **green economic activities**, not companies
- **Measuring transition status**
- **Transparency** & **Investors decision** tool
- Criteria for **green loans**
- **Prevents greenwashing**

6 environmental objectives

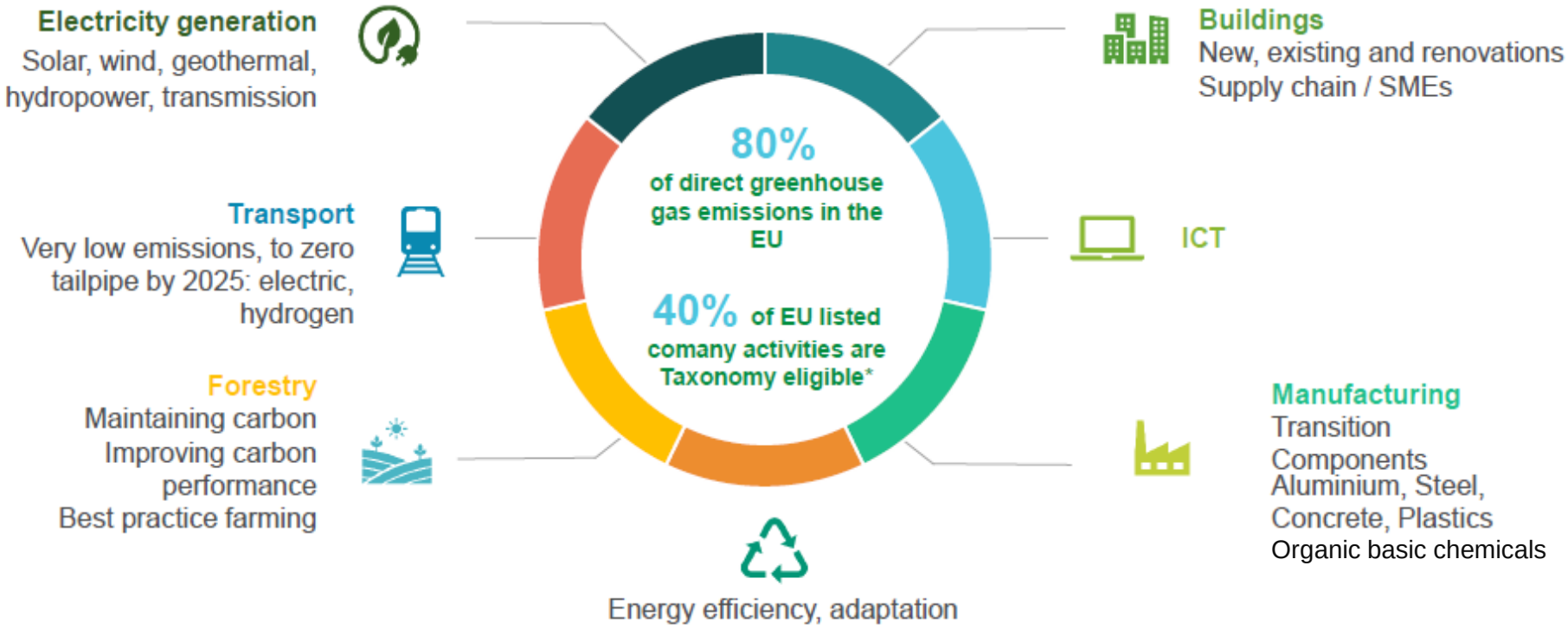


Taxonomy aligned activity =



EU Taxonomy Climate Delegated Act – economic sectors included

- Currently only selected economic sectors are covered by the EU Taxonomy
- Those are high emitting NACE macro sectors for which quantitative data on GHG emissions by NACE Code in the EU
- Enabling sectors: Where economic activities have the potential to enable GHG emission reductions in other sectors



- Activities delayed: agriculture, natural gas, nuclear
- Activities to be reviewed: forestry, bioenergy
- Criteria to be developed soon: certain manufacturing and transport activities

Source: DG Fisma_presentation April Package, Andreas Rajchl, 31 May 2021

EU Taxonomy Climate Delegated Act - sector 4 Energy
Generation of electricity

Substantial contribution – the activity itself

- Solar photovoltaic technology
- Concentrated solar power (CSP) technology
- Wind power
- Ocean energy technologies

100 gCO2/kWh Lifecycle GHG emissions / technology agnostic

- Hydropower
- Geothermal energy
- Renewable non-fossil gaseous and liquid fuels

- Product Carbon Footprint: Life-cycle emissions are calculated using Recommendation 2013/179/EU or ISO 14067, ISO 14064-1 or G-res tool (for hydro)
- Quantified life-cycle GHG emissions are verified by an independent third party.

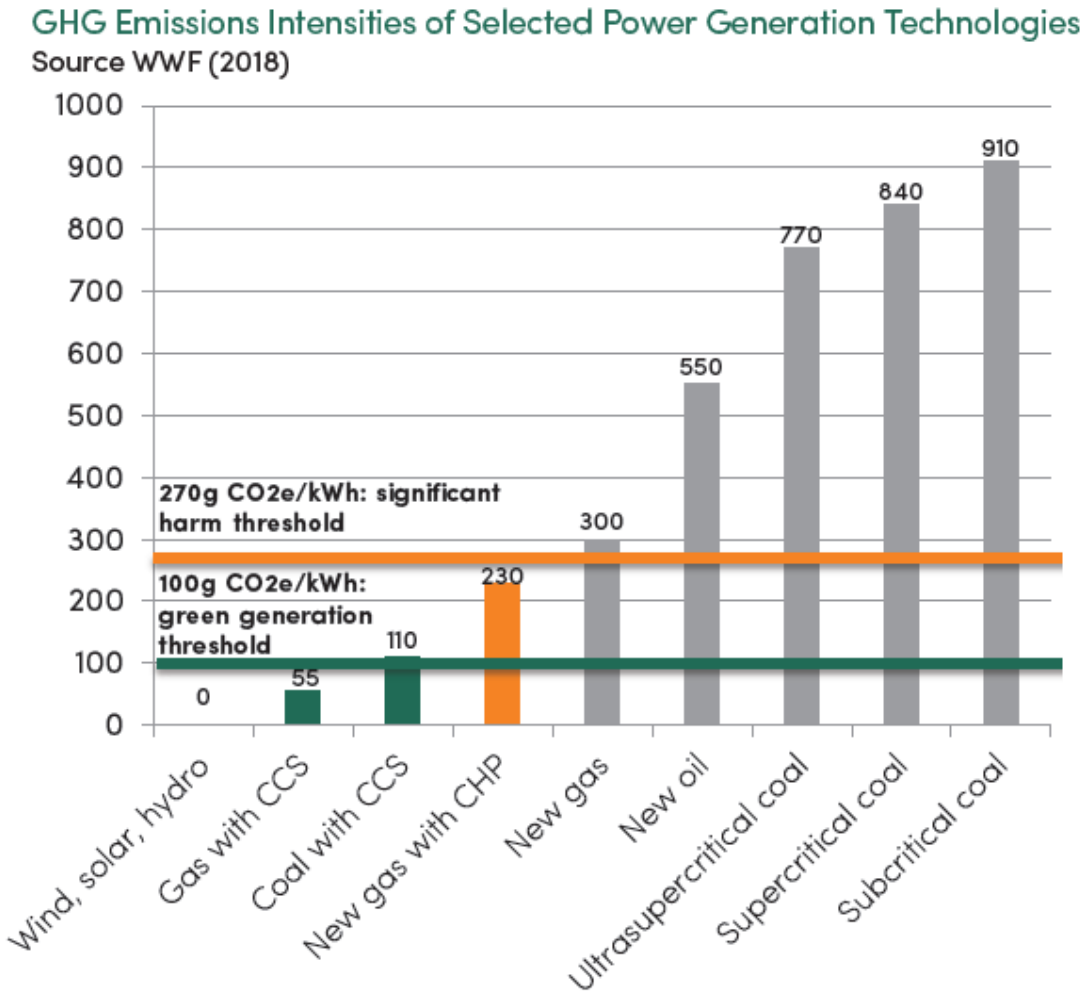
Technology specific criteria

Bioenergy: GHG savings at least 80 % compared to relative fossil fuel comparator set out in Annex VI to Directive (EU) 2018/2001 + additional criteria

- **Implications**
  - Solid fossil fuel are excluded from the Taxonomy
  - Nuclear is excluded on DNSH grounds
  - Gas has been excluded from the final version of the Climate Delegated Act; a separate Delegated Act is under development

Sources: EU Taxonomy Climate Delegated Act, Regulation (EU) 2020/852, Annex 1

EU Taxonomy Climate Delegated Act - sector 4 Energy
Generation of electricity



100 gCO2/kWh Lifecycle GHG emissions intensity limit

- According to IEA
  - carbon intensity of all EU electricity generation in 2018 was 270 gCO2/kWh, which fell to 235 g CO2/kWh in 2019
  - to be carbon free by 2050, EU power generation must decarbonize by more than 7 gCO2/kWh (-3.3%) per annum, from its 235 gCO2/kWh base in 2019.
- Significant contribution to climate mitigation is set at 100 gCO2/kWh lifecycle GHG emissions for relevant electricity generation technologies
- DSNH climate mitigation threshold: 270 gCO2/kWh

Sources: IEA, TEG Final Report, Annex 1, WWF

EU Taxonomy Climate Delegated Act - sector 4 Energy
Electricity Transmission and Distribution

- Investments in grids are part of the EU Taxonomy as an important enabling technology
- Relevant criteria:
  - System is the interconnected European system
  - Average system grid emissions factor calculated as total annual emissions from power generation connected to the system is < 100 g CO2/kWh measured on a life cycle basis in accordance with the electricity generation criteria
  - More than 2/3 of new capacity added on a five-year average is < 100g CO2/kWh measured on a life cycle basis
- “white list”:
  - Electronic vehicle (EV) charging stations and supporting electric infrastructure for the electrification of transport
  - Installation of transmission and distribution transformers*
- “black list”
  - Direct connections or expansion of an existing connection between a substation or network and a power production plant which is more GHG intense than 100g CO2/kWh on life-cycle basis
  - Metering infrastructure that does not meet the smart metering systems requirements**

* that comply with the Tier 2 (1 July 2021) requirements set out in Annex I to the Commission Regulation (EU) No 548/2014[178] and, for medium power transformers with highest voltage for equipment not exceeding 36 kV, with AAA0 level requirements on no-load losses set out in standard EN 50588-1[179

**Article 20 of Directive (EU) 2019/944

Sources: EU Taxonomy Climate Delegated Act, Regulation (EU) 2020/852, Annex 1

EU Taxonomy Climate Delegated Act - sector 4 Energy
Other energy activities

Storage
- **Electricity** – always eligible; for chemical energy storage, the storage medium (as hydrogen or ammonia) complies with the criteria for manufacturing of the product
- **Thermal energy** - always eligible
- **Hydrogen** - construction & operation of hydrogen storage facilities and conversion of existing underground gas storage facilities for hydrogen storage is eligible

Manufacture of biogas and biofuels for use in transport and of bioliquids – Feedstocks must comply with requirements of REDII*; GHG savings at least 65% relative to fossil fuel comparator as defined in Annex V of REDII

Transmission and distribution networks for renewable and low-carbon gases – always eligible are: 1) construction / operation of new network; 2) conversion/repurposing of existing natural gas networks to 100% hydrogen; 3) retrofitting of gas transmission and distribution networks enabling the integration/blending of hydrogen and other low-carbon gases in the network

District heating/cooling distribution – construction/operation/refurbishment must comply with EU Energy Efficiency Directive** (50% renewable or waste heat or 75% cogen heat, or 50% combination of all three); or the activity is a modification to lower temperature regimes or advanced pilot systems

Installation and operation of electric heat pumps – eligible if the Global Warming Potential of the refrigerant does not exceed 675 and if energy efficiency requirements* laid down in the implementing regulations under Directive 2009/125/EC are met.

Cogeneration of heat/cool and production of heat/cool:
- Solar energy and waste heat always eligible
- Geothermal and renewable non-fossil gaseous & liquid fuels: 100 gCO2/kWh on life-cycle basis
- Bioenergy: GHG savings at least 80 % compared to relative fossil fuel comparator set out in Annex VI to Directive (EU) 2018/2001 + additional criteria

*Article 29, paragraphs 2 to 5, of Directive (EU) 2018/2001
**Article 2, point 41, of Directive 2012/27/EU;
***implementing regulations under Directive 2009/125/EC

Sources: EU Taxonomy Climate Delegated Act, Regulation (EU) 2020/852, Annex 1

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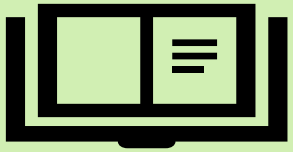
New disclosure according to Article 8 EU Taxonomy Regulation

EU Taxonomy Regulation Article 8: Large companies who are already required to provide a non-financial statement under the EU Non-Financial Reporting Directive must report the proporation of turnover, CAPEX und OPEX aligned with the EU Taxonomy



- From 1 January 2022, i.e. for Sustainability Report 2021:
  - **Simplified reporting** – share of eligible and non-eligible activities in relation to total activities
- From 1 January 2023, i.e. for Sustainability 2022:
  - **Full disclosure -** share of eligible/non-eligible activities and aligned/non-aligned activities in relation to total activities

- Still **outstanding**
  - Decision on classification of natural gas within taxonomy
  - Technical screening criteria on four remaining environmental objectives

EU Taxonomy Climate Delegated Act – List of EU Taxonomy eligible (= ENVIRONNMENTALLY SUSTAINABLE) activities

1. Forestry

- Afforestation
- Rehabilitation and restoration of forests, including reforestation and natural forest regeneration after an extreme event
- Forest management
- Conservation forestry

2. Environmental protection and restoration activities

- Restoration of wetlands

3. Manufacturing

- Manufacture of renewable energy technologies
- Manufacture of equipment for the production and use of hydrogen
- Manufacture of low carbon technologies for transport
- Manufacture of batteries
- Manufacture of energy efficiency equipment for buildings
- Manufacture of other low carbon technologies
- Manufacture of cement
- Manufacture of aluminium
- Manufacture of iron and steel
- Manufacture of hydrogen
- Manufacture of carbon black
- Manufacture of soda ash
- Manufacture of chlorine
- Manufacture of organic basic chemicals
- Manufacture of anhydrous ammonia
- Manufacture of nitric acid
- Manufacture of plastics in primary form

4. Energy

- Electricity generation using solar photovoltaic technology
- Electricity generation using concentrated solar power (CSP) technology
- Electricity generation from wind power
- Electricity generation from ocean energy technologies
- Electricity generation from hydropower
- Electricity generation from geothermal energy
- Electricity generation from renewable non-fossil gaseous and liquid fuels
- Electricity generation from bioenergy
- Transmission and distribution of electricity
- Storage of electricity
- Storage of thermal energy
- Storage of hydrogen
- Manufacture of biogas and biofuels for use in transport and of bioliquids
- Transmission and distribution networks for renewable and low-carbon gases
- District heating/cooling distribution
- Installation and operation of electric heat pumps
- Cogeneration of heat/cool and power from solar energy
- Cogeneration of heat/cool and power from geothermal energy
- Cogeneration of heat/cool and power from renewable non-fossil gaseous and liquid fuels
- Cogeneration of heat/cool and power from bioenergy
- Production of heat/cool from solar thermal heating
- Production of heat/cool from geothermal energy
- Production of heat/cool from renewable non-fossil gaseous and liquid fuels
- Production of heat/cool from bioenergy
- Production of heat/cool using waste heat

5. Water supply, sewerage, waste management and remediation

- Construction, extension and operation of water collection, treatment and supply systems
- Renewal of water collection, treatment and supply systems
- Construction, extension and operation of wastewater collection and treatment
- Renewal of wastewater collection and treatment
- Collection and transport of non-hazardous waste in source segregated fractions
- Anaerobic digestion of sewage sludge
- Anaerobic digestion of bio-waste
- Composting of bio-waste
- Material recovery from non-hazardous waste
- Landfill gas capture and utilisation
- Transport of CO2
- Underground permanent geological storage of CO2

6. Transport

- Passenger interurban rail transport
- Freight rail transport
- Urban and suburban transport, road passenger transport
- Operation of personal mobility devices, cycle logistics
- Transport by motorbikes, passenger cars and light commercial vehicles
- Freight transport services by road
- Inland passenger water transport
- Inland freight water transport
- Retrofitting of inland water passenger and freight transport
- Sea and coastal freight water transport, vessels for port operations and auxiliary activities
- Sea and coastal passenger water transport
- Retrofitting of sea and coastal freight and passenger water transport
- Infrastructure for personal mobility, cycle logistics
- Infrastructure for rail transport
- Infrastructure enabling low-carbon road transport and public transport
- Infrastructure enabling low carbon water transport
- Low carbon airport infrastructure

7. Construction and real estate activities

- Construction of new buildings
- Renovation of existing buildings
- Installation, maintenance and repair of energy efficiency equipment
- Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)
- Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings
- Installation, maintenance and repair of renewable energy technologies
- Acquisition and ownership of buildings

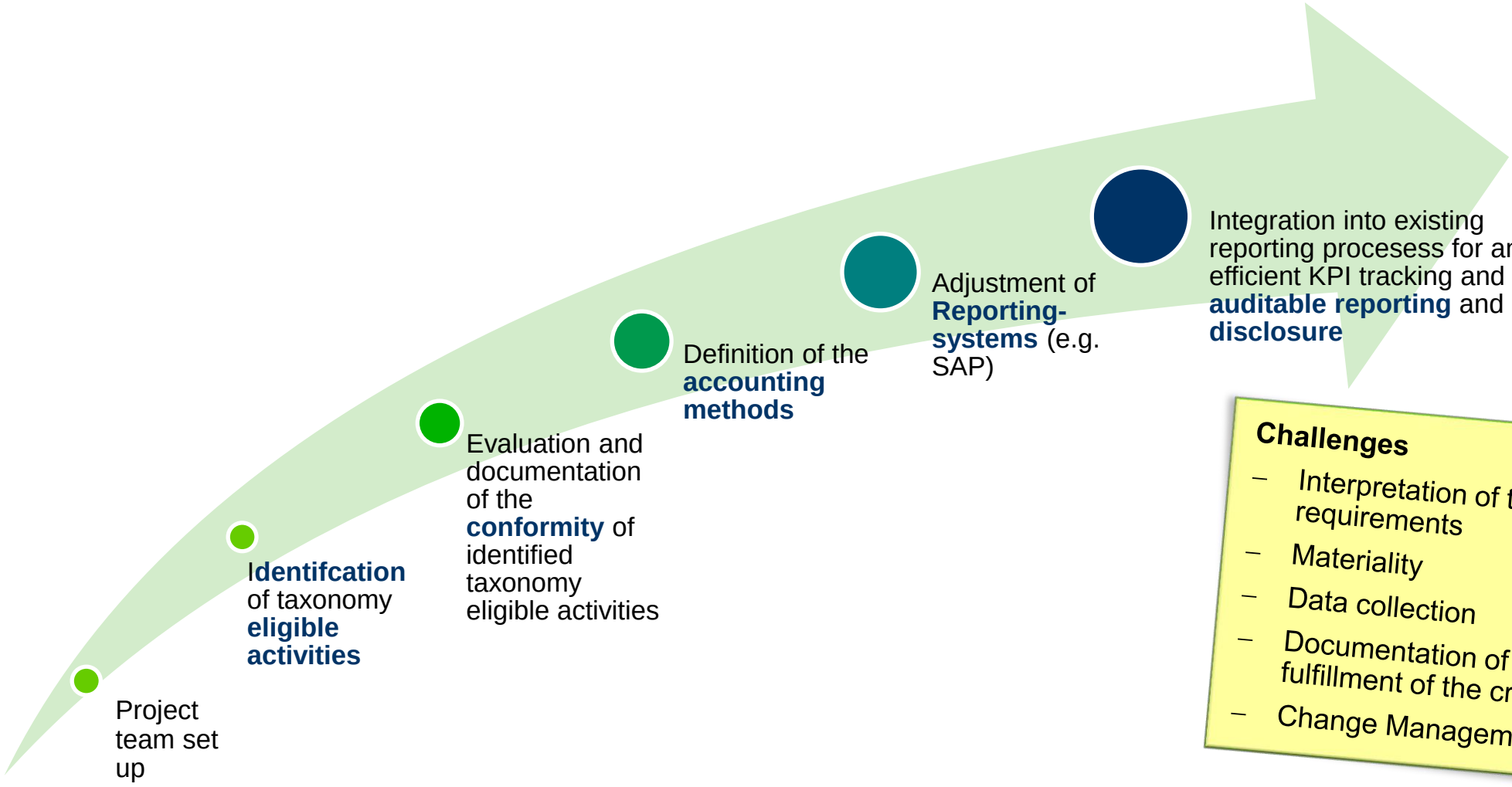
8. Information and communication

- Data processing, hosting and related activities
- Data-driven solutions for GHG emissions reductions

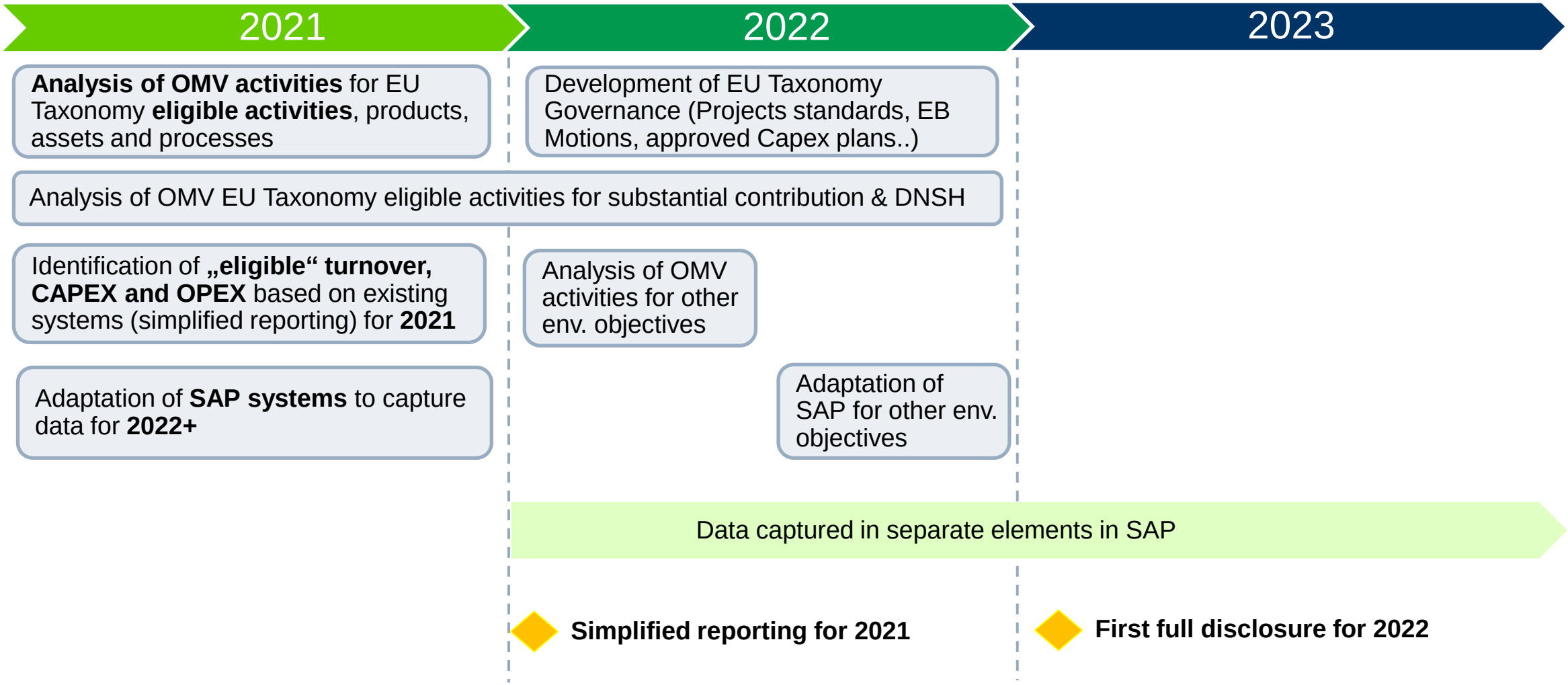
9. Professional, scientific and technical activities

- Close to market research, development and innovation
- Research, development and innovation for direct air capture of CO2
- Professional services related to energy performance of buildings

Roadmap for implementation Art. 8 EU Taxonomy Regulation in OMV



Timeline and key activities for implementation in OMV



Conclusions

- The science-based EU Taxonomy will
  - Help aligning financial flows with the EU‘s 2050 climate ambition,
  - Increase investments in sustainable economic activities which will accelerate the transition to a net-zero emissions economy in line with the objectives of the Green Deal.
  - Reduce the risk of greenwashing
- The EU Taxonomy will not be static, it will be further dynamically align with new improvements and technologies, new regulations and climate ambitions.

- The implementation of the EU Taxonomy Art. 8 disclosure obligation represents a challenge on company level due to limited time for preparation, data collection and reporting process alignment

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