CROSS-BORDER PROJECTS IN THE FIELD OF RENEWABLE ENERGY WITHIN THE FUTURE CEF

INFORMAL STAKEHOLDER WORKSHOP

BRUSSELS, 3RD JUNE 2019

NAVIGANT

AGENDA FOR TODAY

Introduction	1:30 – 1:45	
Overview on renewables action in CEF	1:45 – 2:45	NAVIGANT
Application requirements (incl. CBA)	2:45 – 3:45	NAVIGANT
Coffee Break	3:45 – 4:00	
Eligibility, selection & award criteria	4:00 – 4:45	NAVIGANT
Selection process	4:45 – 5:15	NAVIGANT
Determination of **size of grants** for works	5:15 – 5:45	EY NAVIGANT
Wrap-up and next steps	5:45 – 6:00	

AGENDA FOR TODAY

Introduction	1:30 – 1:45	
Overview on renewables action in CEF	1:45 – 2:45	NAVIGANT
Application requirements (incl. CBA)	2:45 – 3:45	NAVIGANT
Coffee Break	3:45 – 4:00	
Eligibility, selection & award criteria	4:00 – 4:45	NAVIGANT
Selection process	4:45 – 5:15	NAVIGANT
Determination of **size of grants** for works	5:15 – 5:45	EY NAVIGANT
Wrap-up and next steps	5:45 – 6:00	

AGENDA FOR TODAY

Introduction	1:30 – 1:45	
Overview on renewables action in CEF	1:45 – 2:45	NAVIGANT
Application requirements (incl. CBA)	2:45 – 3:45	NAVIGANT
Coffee Break	3:45 – 4:00	
Eligibility, selection & award criteria	4:00 – 4:45	NAVIGANT
Selection process	4:45 – 5:15	NAVIGANT
Determination of **size of grants** for works	5:15 – 5:45	EY NAVIGANT
Wrap-up and next steps	5:45 – 6:00	

THE CB-RES RESEARCH PROJECT | WHO WE ARE

NAVIGANT


Corinna **Klessmann**


Malte **Gephart**


Felix **von Bluecher**


Izabela **Kielichowska**


Philipp **Creutzburg**


Jonas **Schröder**


Bastian **Lotz**

EY


Jan **Pilmaier**


David **Zlamal**


Daniel **Netusil**

Project Duration:

6 months

January to July 2019

Source: Navigant, EY

THE CB-RES RESEARCH PROJECT | PROJECT GOAL

Objective:
Design recommendations for **selecting & allocating financial support** and develop a **draft CBA methodology** for cross border renewables projects under CEF to prepare the work on the **delegated act**

1 Methodologies

Added value of cooperation
Economic analysis
Grants for works
Criteria

2 Process & templates

Detailed selection process
Standard application format

3 Questionnaire & research on project pipeline

4 Expert Workshop *today*

Source: EC, Navigant

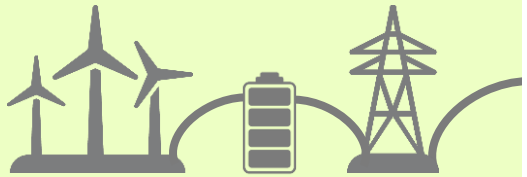
A VARIETY OF PROJECTS IS ELIGIBLE AS CB-RES PROJECT

Eligible projects include:

- Renewables generation in electricity, heating & cooling, transport
- e.g. District heating
- Storage / conversion facilities and their grid connection

Also:

- No pre-defined capacity thresholds or locations in CEF regulation
- Technology-neutral



Individual project

Physical cross-border impact

e.g. dispatchable power in country A reducing grid congestion in country B

Individual project

No physical cross-border impact

e.g. two distant countries jointly financing a wind park via CoopMech

Multiple projects

Not necessarily physical cross-border impact

e.g. joint support scheme (usually in connection with statistical transfer)

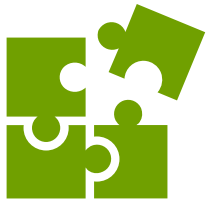
Common characteristics:

MS cooperation[1] | Cash flows | EU added value[2]

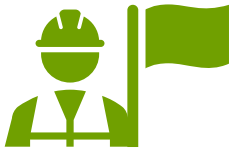
Source: Navigant | 1. Or cooperation between MS and 3rd country provided there is a physical link 2. Compared to national-only project realization

CEF IS DESIGNED TO DISBURSE FINANCIAL SUPPORT

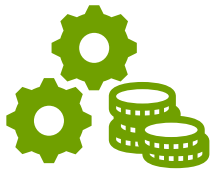
CEF provides **grants for studies** (e.g. preparatory studies, detailed technical studies) and **grants for works**



Grants for works are based on **funding gap evaluations** and **EU added value**



Member State **governments** and private **project promoters** can apply for funding



Blending of CEF support with **instruments from financial institutions** is encouraged

Source: Navigant

SOME SUITABLE PROJECTS EXIST, BUT NEED TO BE FURTHER DEVELOPED

There is an initial pipeline of potential projects…

- 15 MS seek to **cooperate**, 11 MS consider the CEF funding line
- Most projects still at **conceptual stage**, resulting in interest for grants for studies
- Concepts focus on **RES-E** (e.g. offshore & onshore wind, CSP) and some heat projects
- **Opening** of national support scheme may be an additional trigger
- **Synergies** possible between Union Renewable Financing Mechanism, new CEF funding line, CEF synergy projects

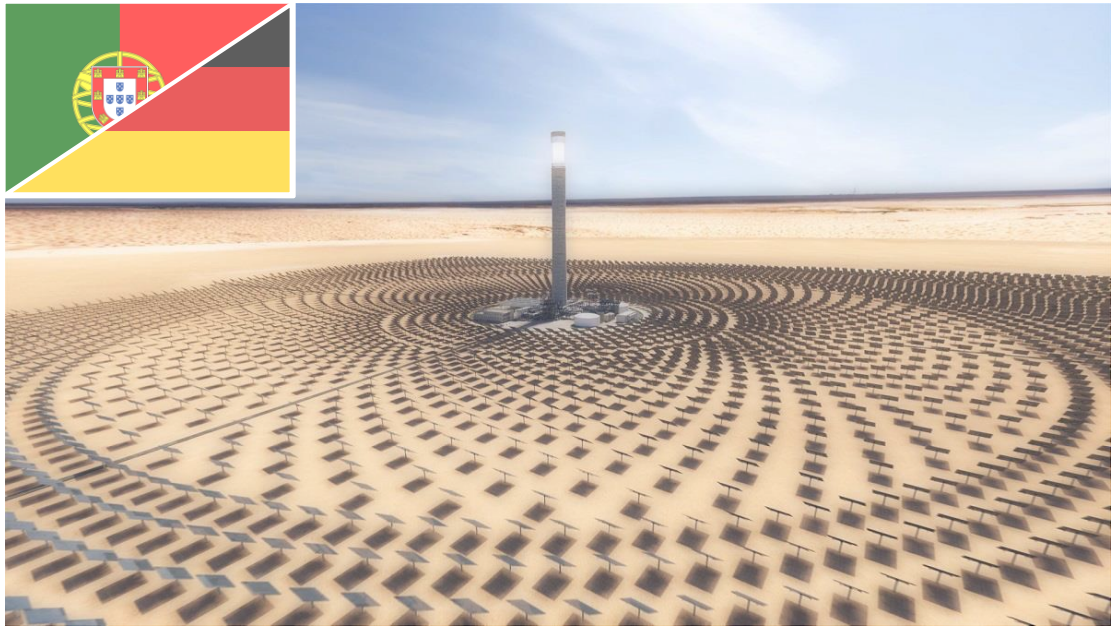
…project promoters (incl. MS) should ideally build up further pipeline

Shape **existing concepts** towards c-b RES funding

Develop **new concepts** with regards to c-b RES cooperation

Source: Navigant

WE WILL PRESENT THE PROPOSED DESIGN ALONG A SPECIFIC CASE STUDY



Project Promoter	***Iberian CSP Lda.***
Project Concept	***CSP Plant in Portugal*** *with thermal energy storage for dispatchable power*
Cross-border dimension	***Germany to finance plant*** *to receive statistical RES benefits*
Project objectives	***Key benefits:*** *(technology) cooperation, RES integration, security of supply, innovation*

All statements and figures relating to the case study are purely hypothetical and are not based on actual physical projects, political agreements, company plans or any other existing examples

Source: Navigant | Picture: solarpaces.org

AGENDA FOR TODAY

Introduction	1:30 – 1:45	
Overview on renewables action in CEF	1:45 – 2:45	NAVIGANT
Application requirements (incl. CBA)	2:45 – 3:45	NAVIGANT
Coffee Break	3:45 – 4:00	
Eligibility, selection & award criteria	4:00 – 4:45	NAVIGANT
Selection process	4:45 – 5:15	NAVIGANT
Determination of **size of grants** for works	5:15 – 5:45	EY NAVIGANT
Wrap-up and next steps	5:45 – 6:00	

CEF APPLICATION PROCESS MUST BE SUITABLE FOR A RANGE OF PROJECTS

Key Requirement

How to **prove an added value** through cross-border cooperation?

Adaptability

Projects of **different types and sizes** may apply

Standardization

A **common evaluation approach** is needed

Cost-Benefit Analysis (CBA)

Flexible approach uses rigorous **quantification** and **qualitative description** of benefits

- Modelling task has to be performed by applicants, building on DG REGIO & ENTSO-E 2.0 CBA guidelines

Source: Navigant

PROJECTS ARE AWARDED BY CEF IN FOUR STAGES

Application Stages

- Prepara-tory Study
- Status as c-b RES project
- Grants for technical studies
- Grants for works

Benefit for applicants

- **Grants** for preparatory studies; can be used for application to next stage
- **Visibility** of being c-b RES project; **Eligibility** to apply next stages
- **Grants** for technical studies; can be used for application to next stage
- **Grants** for works (co-funding of projects)

Level of detail required for application

Qualitative, high-level overview required

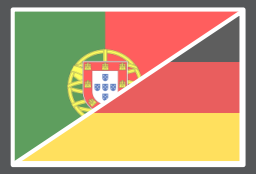
Quantitative, full-fledged assessment required

Source: Navigant

NAVIGANT

PROJECTS ARE AWARDED BY CEF IN FOUR STAGES

Case Study Example



Application Stages	**Benefit for applicants**	**Benefit for Iberian CSP Lda.**
Prepara-tory Study	**Grants** for preparatory studies; can be used for application to next stage	*Preparatory study to cover some of the costs for modelling and **support in the application process***
Status as c-b RES project	**Visibility** of being c-b RES project; **Eligibility** to apply next stages	*Status as c-b RES project to be **eligible for grants***
Grants for technical studies	**Grants** for technical studies; can be used for application to next stage	***Grants for technical studies** to elaborate on details of cross-border effects*
Grants for works	**Grants** for works (co-funding of projects)	*Receive **funding needed for project realization***

Source: Navigant

NINE ELEMENTS ARE TO BE ADDRESSED IN THE APPLICATION

Context (socio-economic, energy market)
Objectives (contribution to CEF)
Project identification
Technical feasibility & environmental sustainability

Added value of cooperation vs. non-cooperation (for the EU, for each MS)

Assessment of commercial viability
Determination of grant size

Application Elements

1-4 Project Description

5 Cooperation Mechanism

6 Added value

7 Economic analysis

8 Financial analysis

9 Risk assessment

Idea
Lol or MoU
Draft agreement

Assessment of costs and benefits to society along 7 indicators

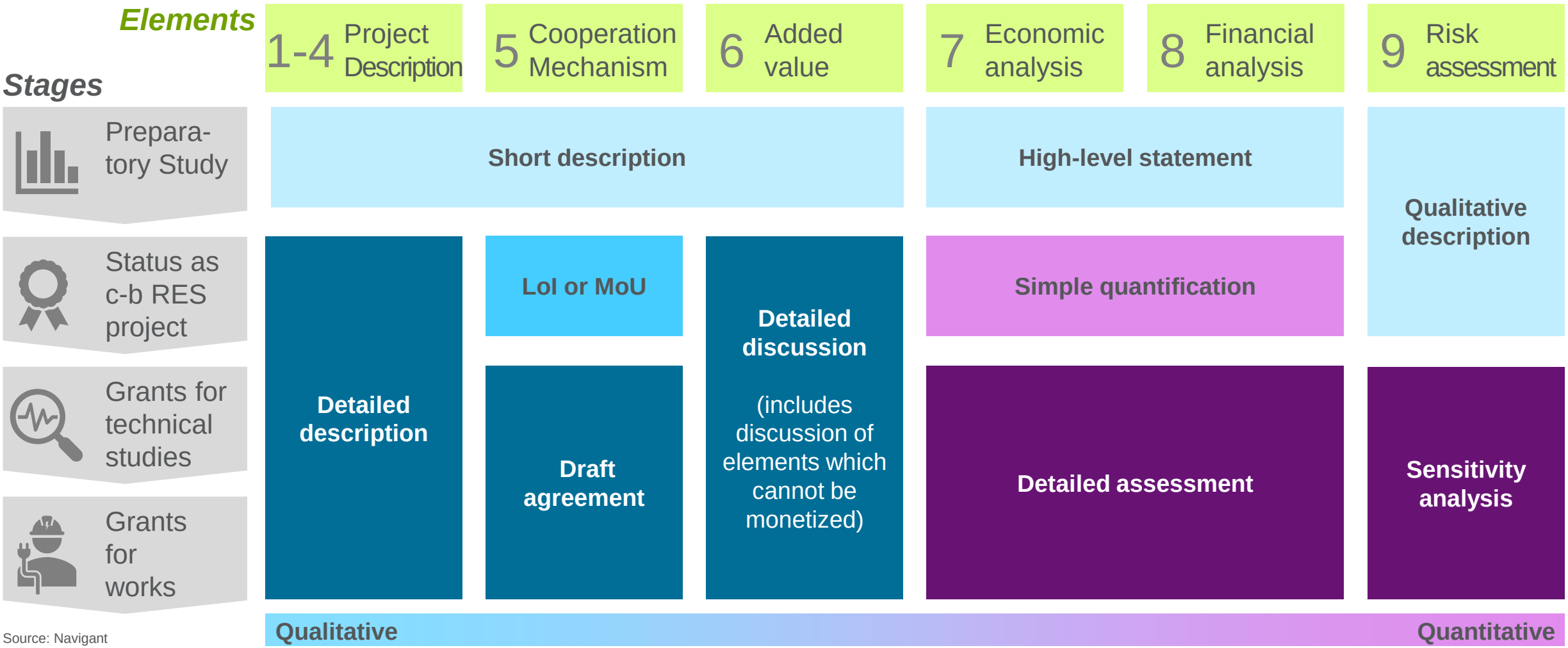
Qualitative risk analysis
Sensitivity analysis

Source: Navigant, DG REGIO, ENTSO-E

= requires project promoter to perform modelling

NAVIGANT

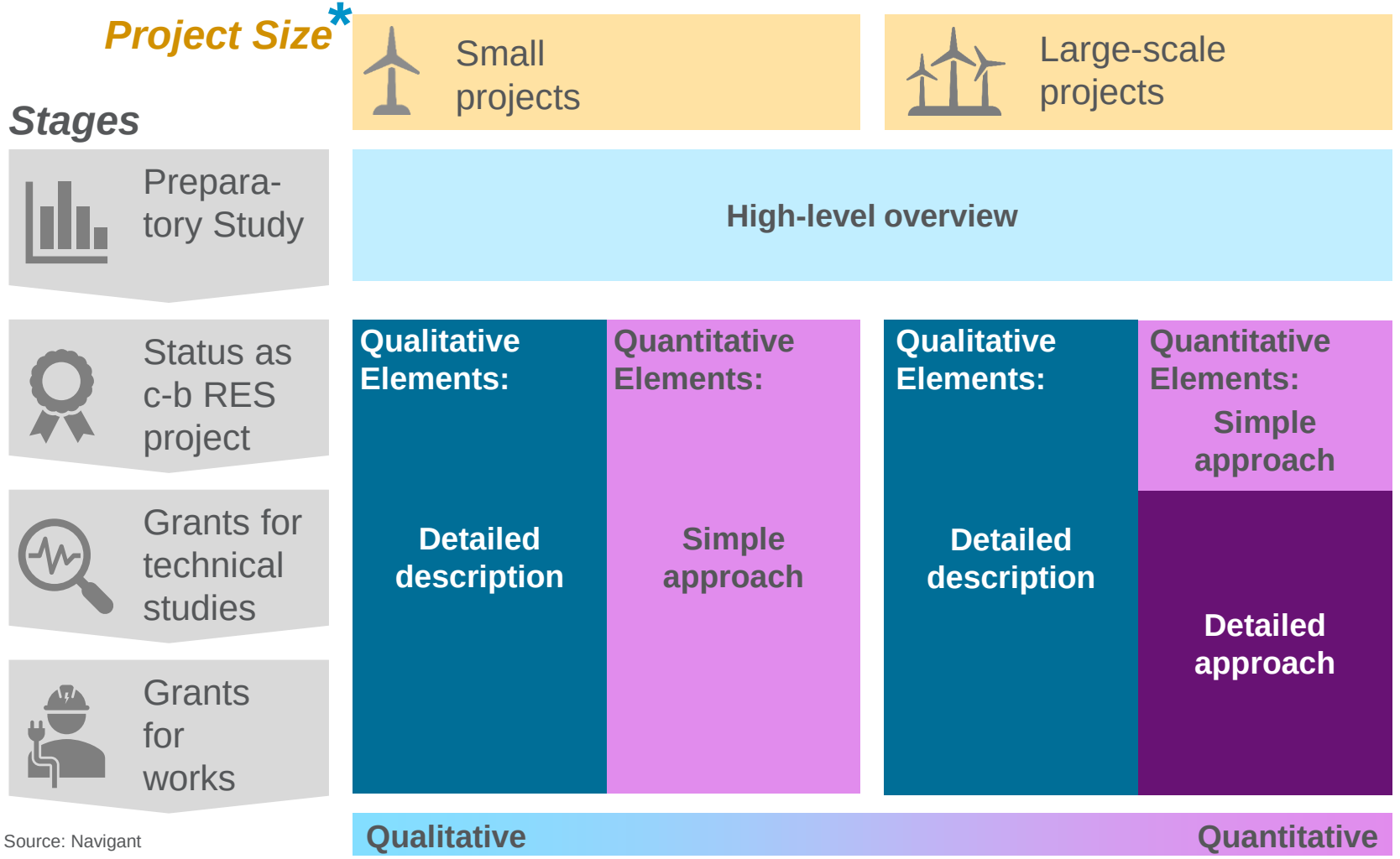
APPLICATION BECOMES MORE ROBUST AND COMPREHENSIVE WITH EACH STAGE



Source: Navigant

NAVIGANT

COMPLEXITY WILL BE KEPT TO MINIMUM FOR SMALL PROJECTS AND EARLY STAGES



Source: Navigant

*Threshold for the applicability of detailed quantification approaches:

- investment cost of €20 million
- a certain grant size

NAVIGANT

COUNTERFACTUALS ARE USED TO SHOW THE BENEFIT OF COOPERATION

CEF Regulation

"provide cost savings […] and/or benefits […] **in comparison to a similar project or renewable energy project implemented by one of the participating Member States alone**"

c-b RES project

- Specific technology, size, location
- Cooperation between contributing MS and host country

\-

Standardized counterfactual

- Same project setup
- Implemented in contributing MS instead of host country

= **Net Benefit**

\-

Case-specific counterfactual

- Different project setup
- Implemented in contributing MS instead of host country

= **Net Benefit**

Source: Navigant

NAVIGANT

COUNTERFACTUALS ARE USED TO SHOW THE BENEFIT OF COOPERATION

CEF Regulation

"provide cost savings […] and/or benefits […] **in comparison to a similar project or renewable energy project implemented by one of the participating Member States alone**"

c-b RES project

- Specific technology, size, location
- Cooperation between contributing MS and host country

\-

Standardized counterfactual

- Same project setup but location unknown
- Implemented in contributing MS instead of host country

= **Net Benefit**

\-

Case-specific counterfactual

Case Study example:

Germany would otherwise achieve its targets nationally (mainly onshore wind and PV)

The project would not be built as such

= **Net Benefit**

Source: Navigant

NAVIGANT

APPLICATION ELEMENTS 1-4: PROJECT DESCRIPTION

Application Elements	1-4 Project Description	5 Cooperation Mechanism	6 Added value	7 Economic analysis	8 Financial analysis	9 Risk assessment

1 Context

Socio-economic trend

Status quo and target setting (NECP)

Energy market conditions

2 Definition of objectives

Contribution to CEF objectives

Contribution to c-b RES objectives

3 Project identification

Basic information and data (technology, size, features)

Responsible bodies for project implementation

4 Technical feasibility & sustainability

Technical design

Implementation schedule

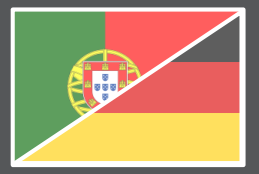
Demand analysis

Environmental considerations (including climate change)

Source: Navigant

APPLICATION ELEMENTS 1-4: PROJECT DESCRIPTION

Case Study Example



Application Elements	1-4 Project Description	5 Cooperation Mechanism	6 Added value	7 Economic analysis	8 Financial analysis	9 Risk assessment

1 Context

Germany: *electricity RES share: 65% RES-E target for 2030*

Portugal: *electricity RES share 54,1%, high RES share in some regions and stress on the grid*

2 Definition of objectives

*Cross-border **cooperation***

*Support **integration** of the internal market*

*Facilitate **decarbonisation** of the economy*

*Enable uptake of **innovative** RES technologies*

3 Project identification

*100 MW **CSP plant** with thermal energy storage system*

*Responsible **bodies**: project developer, German and Portugese ministries, TSO, DSO, …*

4 Technical feasibility & sustainability

*Project at **conceptual stage***

Preparatory study in 2020, operational by 2025

*Project contributes to **climate change mitigation**, limited environmental impact*

Source: Navigant

NAVIGANT

APPLICATION ELEMENT 5: COOPERATION MECHANISM

Application Elements	1-4 Project Description	**5 Cooperation Mechanism**	6 Added value	7 Economic analysis	8 Financial analysis	9 Risk assessment

RED II

Art. 8
Statistical transfer

Statistical transfer of specified amount RES energy between MS

One or more years

Agreed transfer price

Art. 9
Joint projects MS & MS

Jointly implement projects

Share costs and benefits

Single- or multi-project arrangements

Art. 11
Joint projects MS & third country

Jointly implement projects

Shared costs and benefits

Single- or multi-project arrangements

Physical link needed

Art. 13
Joint support schemes

Joint or partly coordinated national support schemes

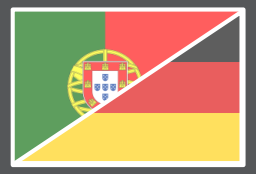
Shared costs and benefits

Single- or multi-project arrangements

Source: Navigant

APPLICATION ELEMENT 5: COOPERATION MECHANISM

Case Study Example



RED II

Art. 8
Statistical transfer

Statistical transfer of specified amount RES energy between MS

One or more years

Agreed transfer price

Art. 9
Joint projects MS & MS

In case study, cooperation between:

REPÚBLICA PORTUGUESA
AMBIENTE E TRANSIÇÃO ENERGÉTICA

***Portuguese Ministry** for the Environment and Energy Transition*

Bundesministerium für Wirtschaft und Energie

***German Ministry** for Economic Affairs and Energy*

Art. 11
Joint projects MS & third country

Art. 13
Joint support schemes

Joint or partly coordinated national support schemes

Shared costs and benefits

Single- or multi-project arrangements

Source: Navigant

NAVIGANT

APPLICATION ELEMENT 6: ADDED VALUE OF COOPERATION

Application Elements	1-4 Project Description	5 Cooperation Mechanism	**6 Added value**	7 Economic analysis	8 Financial analysis	9 Risk assessment

Quantifiable added value*

Project has positive impact on energy system and environment

Quantifiable and monetizable

Focused in economic analysis

Policy coordination & convergence

Project supports policy and regulation harmonisation

Change of regulation towards best practices

Impact desribed through e.g. number of MS involved

Innovation*

Project provides innovate features compared to state of the art

Alignment with EU innovation strategy (e.g. SET Plan)

Contribution to advancing TRLs

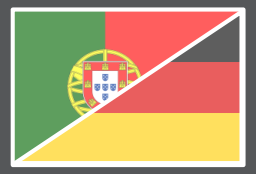
Source: Navigant

* Indicators described in CEF regulation

NAVIGANT

APPLICATION ELEMENT 6: ADDED VALUE OF COOPERATION

Case Study Example



Application Elements	1-4 Project Description	5 Cooperation Mechanism	**6 Added value**	7 Economic analysis	8 Financial analysis	9 Risk assessment

Quantifiable added value*

*Slightly **reduced cost of support** for Germany's target achievement compared to national deployment*

Reduced GHG emissions

***Improved security of supply** for Portugal*

Policy coordination & convergence

***Policy coordination**, as Portugal and Germany would exchange on supportive framework for CSP*

Innovation*

***Uptake of an innovative technology** in line with EU innovation strategy (e.g. SET plan)*

***Advancing the TRL** of applied technologies contributes to EU industrial leadership*

Source: Navigant

* Indicators described in CEF regulation

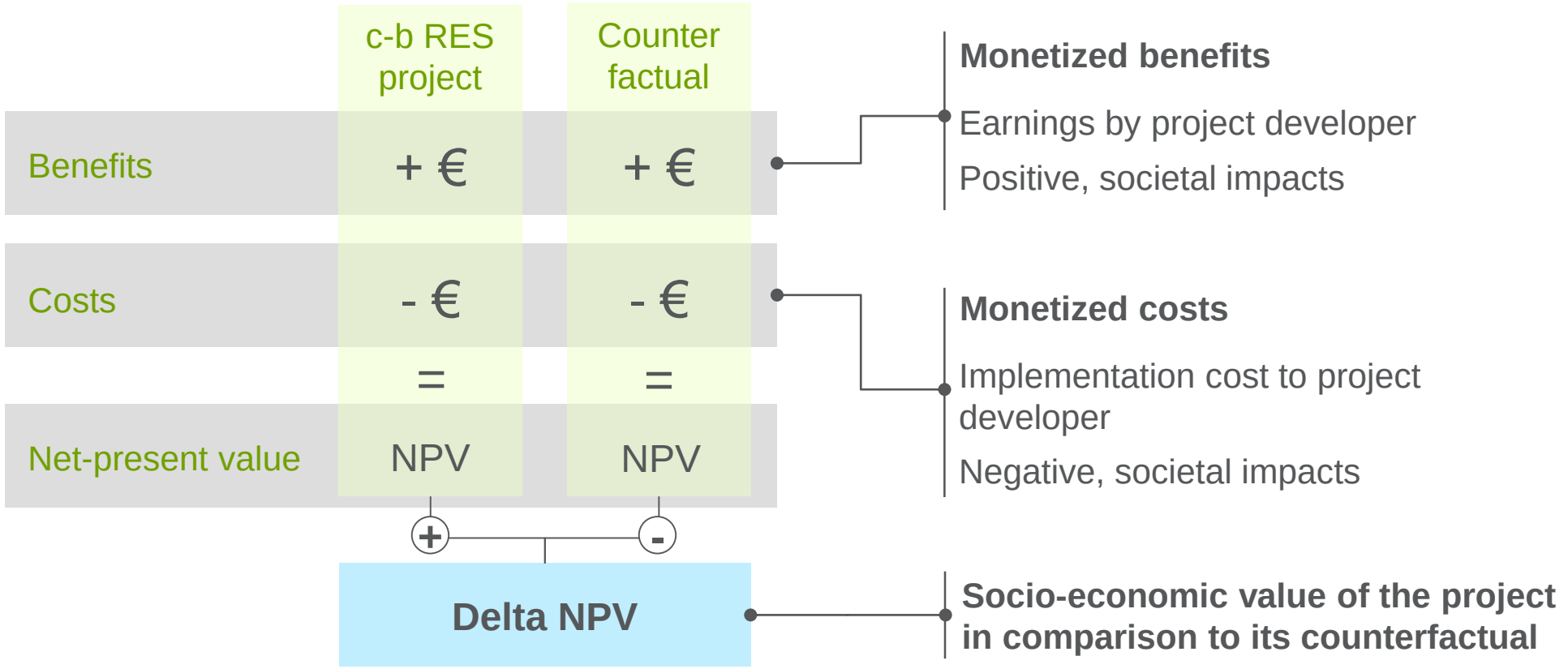
NAVIGANT

APPLICATION ELEMENT 7: ECONOMIC ANALYSIS (I) – GOAL

Application Elements	1-4 Project Description	5 Cooperation Mechanism	6 Added value	**7 Economic analysis**	8 Financial analysis	9 Risk assessment

Goal of the economic analysis

Do project benefits outweigh its cost from a **wholistic, societal perspective**?



Source: Navigant

NAVIGANT

APPLICATION ELEMENT 7: ECONOMIC ANALYSIS (II) – INDICATORS

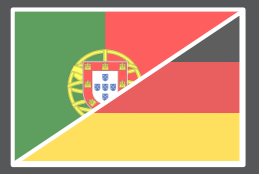
Application Elements	1-4 Project Description	5 Cooperation Mechanism	6 Added value	**7 Economic analysis**	8 Financial analysis	9 Risk assessment

	a **Energy Generation**	b **System Integration**	c **Cost of Support**	d **GHG Emissions**	e **Security of Supply**	f **Air & Local Pollution**	g **Innovation**
Description	Costs of energy generation	Systemwide effects of RES integration	Grants through existing support schemes	Natural and anthropogenic GHGs	Availability, reliability, adequacy of energy supply	External cost of local pollutants	Degree of innovation provided by the project
Simple approach	High-level LCOE calculation	Estimation of market impact (energy x price)	Benchmarks of support measures (e.g. auction results)	FLH x system emission equivalents	Capacity contribution, supply diversification	Similar to assessment of GHG emissions	Mapping to EU & national research roadmaps
Detailed approach	NPV of plant's lifetime cost	Comprehensive market and grid modelling (TEN-E CBA)		Based on market and grid modelling	Probabilistic market and grid modelling[1]		Optional quantification through shadow profits

1. ENTSO-E MAF

APPLICATION ELEMENT 7: ECON. ANALYSIS (II) – INDICATORS

Case Study Example



Application Elements	1-4 Project Description	5 Cooperation Mechanism	6 Added value	**7 Economic analysis**	8 Financial analysis	9 Risk assessment

	a Energy Generation	b System Integration	c Cost of Support	d GHG Emissions	e Security of Supply	f Air & Local Pollution	g Innovation
Description	Costs of energy generation	Systemwide effects of RES integration	Grants through existing support schemes	Natural and anthropogenic GHGs	Availability, reliability, adequacy of energy supply	External cost of local pollutants	Degree of innovation provided by the project
Simple approach	***Net effect: 0*** *Better resource availability, higher financing costs, costly technology*	***Net effect: +*** *Cost savings as plant will be dispatchable*	***Net effect: 0*** *Cost savings for as CSP & storage, offset by higher technology costs*	***Net effect: +*** *Delivery of electricity at high prices implies replacement of coal and gas*	***Net effect: +*** *Dispatchable plant contributes to limiting the quantity of Energy Not Served (ENS)*	***Net effect: +*** *Delivery of electricity at high prices implies replacement of coal and gas*	***Net effect: +*** ***Uptake of an innovative technology*** *in line with SET plan is used*
Detailed approach							

NAVIGANT

APPLICATION ELEMENT 7: ECONOMIC ANALYSIS (III) – QUANTIFICATION

Indicators

Economic analysis takes into account quantifiable and non-quantifiable indicators

Quantifiable Indicators

Suitable approaches for quantification are available

Non-quantifiable Indicators

Quantification too challenging or no reliable approaches available

Modelling

Assessing the system impact requires system modelling

Off-the-shelf tools are available to reduce transaction cost

No modelling needed for small projects, early stages

All modelling to be conducted by project promoter

Source: Navigant

APPLICATION ELEMENT 7: ECONOMIC ANALYSIS (IV) – SCENARIOS

Application Elements	1-4 Project Description	5 Cooperation Mechanism	6 Added value	**7 Economic analysis**	8 Financial analysis	9 Risk assessment

Scenario Framework

Represents **uncertainty** of future developments

Scenario 1
e.g. „Collation of NECPs“

Vision of the future energy system and economy

- c-b RES project
- Counterfactual

Scenario 2
e.g. „Not on Target“

Scenario 3
e.g. „High Carbon Price“

For risk assessment

Scenario characteristics

Time horizon

Regional scope

Sectoral scope (Power, Gas, etc.)

Level of detail – Time

Level of detail – Spatial

Level of detail – Stochasticity

Source: Navigant

NAVIGANT

APPLICATION ELEMENT 8: FINANCIAL ANALYSIS FULFILLS FOUR FUNCTIONS

Application Elements	1-4 Project Description	5 Cooperation Mechanism	6 Added value	7 Economic analysis	**8 Financial analysis**	9 Risk assessment

		Key Question
1	Assessing **Commercial Viability**	Is the project profitable **without EU support?**
2	Quantifying **Amount of Grants**	How much **support** would the project receive from EU funds?
3	Calculating **Co-financing rate**	What **share of eligible costs** would CEF finance?
4	Examining **Financial Sustainability**	Does the project have **enough cash** secured at all times?

The Financial Analysis will be **discussed in detail** in today's last session

Source: Navigant

NAVIGANT

APPLICATION ELEMENT 9: RISK ASSESSMENT

Application Elements	1-4 Project Description	5 Cooperation Mechanism	6 Added value	7 Economic analysis	8 Financial analysis	**9 Risk assessment**

Qualitative risk assessment

Regulatory and administrative

Procurement and Construction

Operational and Financial

Scenario framework

Uncertainty addressed by scenarios

Positive NPV has to be achieved in each scenario

Sensitivity analysis

Variation of modelling input parameters

Parameters with high influence on CBA results are risk factors

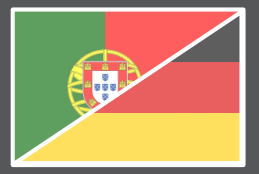
For every significant risk found, a risk **mitigation plan** must be developed

Source: Navigant

NAVIGANT

APPLICATION ELEMENT 9: RISK ASSESSMENT

Case Study Example



Qualitative risk assessment

No cooperation agreement *between Portugal and Germany implemented*

Administrative barriers *in the permitting procedure in Portugal result in massive delays*

Scenario framework

*A **set of two scenarios** is employed for quantifications*

Scenario 1 in line with 2050 targets

Scenario 2 with lower RES growth and 2050 targets are missed

Sensitivity analysis

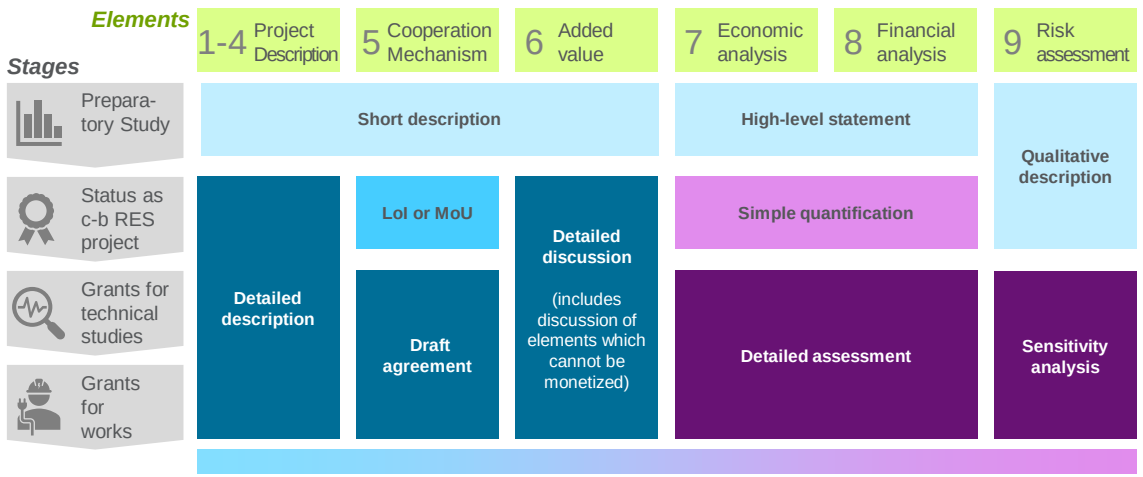
*Impact of higher **financing costs** is evaluated by considering three different values for the WACC*

*Evaluation of critical points in **permitting procedure** presented incl. steps to ensure no massive delays*

Source: Navigant

NAVIGANT

WRAP UP: APPLICATION PROCESS IS RIGOROUS YET FLEXIBLE



Application process is structured in **4 stages** with **9 elements** each

Process provides **applicability** across a wide range of projects

Economic analysis is only one part of the CBA and its **technical complexity is adapted** to stage and project

Source: Navigant

NAVIGANT

AGENDA FOR TODAY

Introduction	1:30 – 1:45	
Overview on renewables action in CEF	1:45 – 2:45	NAVIGANT
Application requirements (incl. CBA)	2:45 – 3:45	NAVIGANT
Coffee Break	3:45 – 4:00	
Eligibility, selection & award criteria	4:00 – 4:45	NAVIGANT
Selection process	4:45 – 5:15	NAVIGANT
Determination of **size of grants** for works	5:15 – 5:45	EY NAVIGANT
Wrap-up and next steps	5:45 – 6:00	

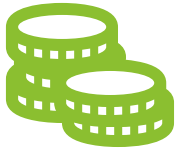
AGENDA FOR TODAY

Introduction	1:30 – 1:45	
Overview on renewables action in CEF	1:45 – 2:45	NAVIGANT
Application requirements (incl. CBA)	2:45 – 3:45	NAVIGANT
Coffee Break	3:45 – 4:00	
Eligibility, selection & award criteria	4:00 – 4:45	NAVIGANT
Selection process	4:45 – 5:15	NAVIGANT
Determination of **size of grants** for works	5:15 – 5:45	EY NAVIGANT
Wrap-up and next steps	5:45 – 6:00	

CRITERIA NEED TO REFLECT OBJECTIVES FROM CEF REGULATION

Cooperation

Promotion of cross-border cooperation



Cost-effectiveness

Cost-effective RES deployment in the Union

Target achievement

EU target achievement of at least 32% in 2030

Innovation

Contribution to uptake of innovative technologies, including storage

Source: Navigant

THE SELECTION PROCESS NEEDS TO BE BASED ON CLEARLY DEFINED CRITERIA

Eligibility

Criteria to assess the **admissibility** of projects to the selection process

Selection

Criteria to assess the **applicant's ability** to complete the proposed action

Award

Criteria to award the **status** of C-B project and/or award **grants** for studies or works

- The CEF Regulation already stipulates for eligibility and award criteria.
- Specific criteria can be further **refined in the work programme and calls for proposals** (Delegated Act = "middle stage")

Source: Navigant

ELIGIBILITY CRITERIA: CRITERIA ACROSS APPLICATION STAGES

Eligibility

Selection

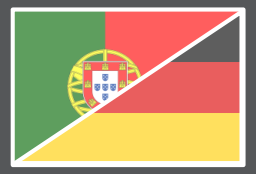
Award

Citerion	Assessment based on	Stages			
1. Eligible entities legal entities established in a Member State or a third country	**1-4** Project Description Information on legal status of applicants provided in project description	X	X	X	X
2. Cooperation Agreement or any other kind of arrangement between at least two Member States and/or a third country	**5** Cooperation Mechanism LoI/MoU/Draft agreement: description of project concept, type and principles of cooperation		X	X	X

Source: Navigant

NAVIGANT

ELIGIBILITY CRITERIA: CRITERIA ACROSS APPLICATION STAGES



Eligibility

Selection

Award

Citerion	Case study example	Stages			
1. Eligible entities legal entities established in a Member State or a third country	***Iberian CSP Lda.*** *is a project developer in Portugal*	x	x	x	x
2. Cooperation Agreement or any other kind of arrangement between at least two Member States and/or a third country	***MoU signed*** *initially by the Portugese and the German Ministry* *The envisaged Cooperation Mechanism is a* ***Joint Project***		x	x	x

Source: Navigant

ELIGIBILITY CRITERIA: CRITERIA ACROSS APPLICATION STAGES

Eligibility

Selection

Award

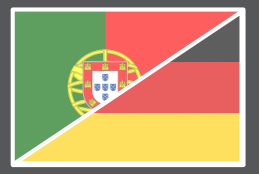
Citerion	Assessment based on	Stages		
3. Existence of CBA A project-specific CBA is compulsory	**1-4** Project Description → **9** Risk assessment Existence of a CBA in line with requirements for each application stage	x	x	x
4. Benefits > costs* Potential overall benefits of cooperation outweigh costs	**7** Economic analysis	x	x	x (!)
5. Cost savings* in comparison to a similar project or RES project implemented by one of the participating MS alone	CBA (economic analysis): >0 (yes/no)	x	x	x (!)

***Grants for works: significant cost savings and/or benefits**

Source: Navigant

NAVIGANT

ELIGIBILITY CRITERIA: CRITERIA ACROSS APPLICATION STAGES



Eligibility

Selection

Award

Citerion	Case study example	Stages		
3. Existence of CBA A project-specific CBA is compulsory	***High-level CBA*** *(based on pre-feasibility study) including detailed project description*	x	x	x
4. Benefits > costs* Potential overall benefits of cooperation outweigh costs	***Social benefit of 5m€*** *+ intensified political cooperation among MS*	x	x	x (!)
5. Cost savings* in comparison to a similar project or RES project implemented by one of the participating MS alone	*Cost savings due to impact on* ***system integration, GHG reduction, security of supply***	x	x	x (!)

***Grants for works: significant cost savings and/or benefits**

Source: Navigant

NAVIGANT

ELIGIBILITY CRITERIA: CRITERIA FOR GRANTS FOR WORKS

Eligibility

Selection

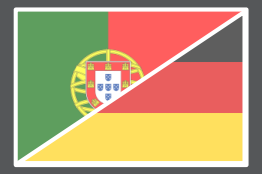
Award

Citerion	Assessment based on	Stages			
6. Status as c-b RES project Awarding of grants is conditional on prior attainment of status of c-b RES project	Project has acquired status (yes/no)			X	X
7. Commercial gap Project would not materialise in the absence of the grant	**8** Financial analysis Results of cash-flow analysis (yes/no)				X

Source: Navigant

NAVIGANT

ELIGIBILITY CRITERIA: CRITERIA FOR GRANTS FOR WORKS



Eligibility

Selection

Award

Citerion	Case study example	Stages			
6. Status as c-b RES project Awarding of grants is conditional on prior attainment of status of c-b RES project	***Status as c-b RES project granted*** *after assessment by evaluators, Group, stakeholders*			X	X
7. Commercial gap Project would not materialise in the absence of the grant	*A financial analysis shows that the project has a* ***negative FNPV***				X

Source: Navigant

SELECTION CRITERIA: CAN APPLICANT COMPLETE PROPOSED ACTION?

Eligibility

Selection

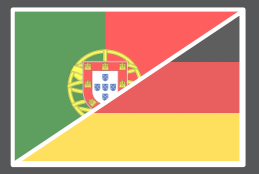
Award

Citerion	Assessment based on	Stages			
1. Financial capacity Applicant has stable and sufficient funding to maintain activity throughout the period for which the grant is awarded	**1-4** Project Description Financial capacity check form and financial statements to demonstrate that organization is liquid, solvent and profitable.			X	X
2. Operational capacity Applicant has professional competencies and qualifications required to complete the action	**1-4** Project Description Previous activities carried out in related fields			X	X

Source: Navigant

NAVIGANT

SELECTION CRITERIA: CAN APPLICANT COMPLETE PROPOSED ACTION?



Eligibility

Selection

Award

Citerion	Case study example	Stages			
1. Financial capacity Applicant has stable and sufficient funding to maintain activity throughout the period for which the grant is awarded	***Financial capacity check form and financial statement** are assessed positively*			X	X
2. Operational capacity Applicant has professional competencies and qualifications required to complete the action	*Project promoter proves professional competencies and qualifications through list of **similar activities conducted previously***			X	X

Source: Navigant

NAVIGANT

ELEMENTS TO BE CONSIDERED FOR AWARD CRITERIA (ART. 13 CEF REGULATION)

Eligibility

Selection

Award

Economic, social and environmental impact, incl. soundness, comprehensiveness and transparency of the analysis ✓

Innovation and digitalization ✓

Cross-border dimension ✓

European added value ✓

Synergies between the transport, energy and digital sectors ✗

Maturity of the action in the project development ✓

Soundness of the implementation plan ✓

Catalytic effect of Union financial assistance on investment ✓

Need to **overcome financial obstacles** ✓

Potential of **dual-use** in the context of military mobility ✗

Consistency with **Union and national energy and climate plans** ✓

Source: Navigant

AWARD CRITERIA (I)

Eligibility

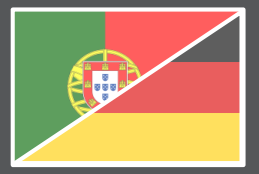
Selection

Award

Citerion	Assessment based on	Stages		
1. Quality of the plan proposed Coherence between proposed objectives and planned resources/activities: timely completion, risk control processes	**1-4** Project Description Project description, schedule and management as well as stated objectives.	X	X	X
2. Maturity of the action Status of preparation of action & capacity for its implementation	**1-4** Project Description Information provided by applicant on project status, e.g. time plan, deployed equipment.		(X)	X

Source: Navigant

AWARD CRITERIA (I)



Eligibility

Selection

Award

Citerion	Case study example	Stages			
1. Quality of the plan proposed Coherence between proposed objectives and planned resources/activities: timely completion, risk control processes	***Quality is assessed based on detailed description of:*** • *Technical feasibility* • *Risk assessment of project implementation* → ***Point score: 3.5*** *(out of 5)*		x	x	x
2. Maturity of the action Status of preparation of action & capacity for its implementation	***Maturity is assessed positively*** *due to status of preparation, readiness to reach financial close and cooperation agreement* → ***Point score: 4.5*** *(out of 5)*			(x)	x

Source: Navigant

NAVIGANT

AWARD CRITERIA (II)

Eligibility

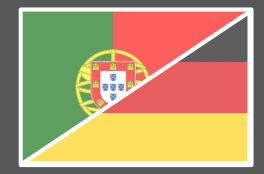
Selection

Award

Citerion	Assessment based on				Stages		
3. Impact (a) Economic, social and environmental **impact**	1-4 Project Description	6 Added value	7 Economic analysis	Overall result of economic analysis: total net benefit as well as quality of the analysis	X	X	X
(b) **Innovation** - upscaling of innovative technology with RES leadership potential				Innovation indicator of CBA analysis and additional qualitative information from applicant regarding deployed technologies	X	X	X
(c) **Cross-border dimension** - intensity of cooperation				No. of MS involved, magnitude of c-b benefits or payments, regulatory convergence	X	X	X

Source: Navigant

AWARD CRITERIA (II)



Eligibility

Selection

Award

Citerion	Case study example	Stages		
3. Impact (a) Economic, social and environmental **impact**	***Reduced GHG emissions:*** *replacement of coal and gas* ***System integration:*** *cost savings as plant delivers electricity of electricity at high prices* ***Security of supply:*** *dispatchable plant, limiting the quantity of Energy Not Served (ENS)*	X	X	X
(b) **Innovation** - upscaling of innovative technology with RES leadership potential	***Innovation:*** *An innovative technology is used*	X	X	X
(c) **Cross-border dimension** - intensity of cooperation	***Policy coordination*** *between Portugal and Germany* → ***Point score: 3*** *(out of 5)*	X	X	X

Source: Navigant

AWARD CRITERIA (III)

Eligibility

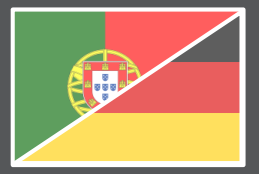
Selection

Award

Citerion	Assessment based on	Stages		
4. Priority and urgency of the action (d) **European added value** - cost-effective achievement of EU RES target, enhancing EU technical leadership, decarbonization	1-4 Project Description; 6 Added value; 7 Economic analysis Information from applicants (e.g. use of innovative technologies) & on added value of cooperation	X	X	X
(l) **Consistency with Union plans and NECPs**		X	X	X
5. Stimulating Effect catalytic effect of Union financial assistance on investment	7 Economic analysis + 8 Financial analysis Extent to which funding will ensure/accelerate implementation of the action, e.g. “benefit per required grant”			X

Source: Navigant

AWARD CRITERIA (III)



Eligibility

Selection

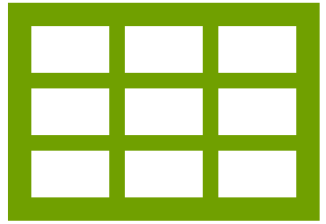
Award

Citerion	Case study example	Stages		
4. Priority and urgency of the action (d) **European added value** - cost-effective achievement of EU RES target, enhancing EU technical leadership, decarbonization	***European added value:*** *high score due to contribution to EU technical leadership*			
	Consistency*: project is in line with EU long-term decarbonization stratey, e.g. by facilitation RES integration; enhancing SoS*	X	X	X
(l) **Consistency with Union plans and NECPs**	→ ***Point score: 4.5*** *(out of 5)*	X	X	X
5. Stimulating Effect catalytic effect of Union financial assistance on investment	***Benefit per grant is moderate***			X
	→ ***Point score: 3*** *(out of 5)*			

Source: Navigant

DECISION ON AWARDING STATUS AND GRANTS IS BASED ON EVALUATION MATRIX

- **Each project will be assessed individually** by the evaluators.
- The evaluation and scoring methodology needs to be applicable to very **different project contexts**.
- **Detailed sub-indicators** applicable for each stage need to be defined for each award criterion.
- The assessment of each award criteria (as well as sub-indicators) will be translated into a **point score** from 0 (insufficient) to 5 (excellent).



Evaluation matrix derives a comparable final point score for each project

Source: Navigant

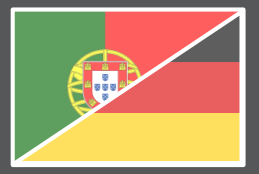
THE EVALUATION MATRIX MAY LOOK SIMILAR TO THIS…

Award criteria	Elements to be considered	Sub-indicators (scored from 0 to 5)	Score per element	Average total score per award criteria
1. Maturity	Maturity of the action in the project development	Status of preparation of the action, i.e. its capacity for implementation in line with the foreseen time plan	**4**	**4.5**
		Readiness to reach financial close	**4**	
		Status of the cooperation agreement	**5**	
2. Quality	xyz			**x**
3. Impact	xyz			**x**
4. Stimulating Effect	xyz			**x**
5. Priority & urgency	xyz			**x**
Total score				**# / 25**

Source: Navigant

THE EVALUATION MATRIX MAY LOOK SIMILAR TO THIS…

Case Study Example



Award criteria	Elements to be considered	Sub-indicators (scored from 0 to 5)	Score per element	Average total score per award criteria
1. Maturity	Maturity of the action in the project development	Status of preparation of the action, i.e. its capacity for implementation in line with the foreseen time plan	4	4.5
		Readiness to reach financial close	4	
		Status of the cooperation agreement	5	
2. Quality	xyz			3.5
3. Impact	xyz			3
4. Stimulating Effect	xyz			3
5. Priority & urgency	xyz			4.5
Total score				18.5 / 25

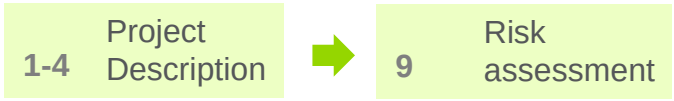
Source: Navigant

FOUR THINGS TO KEEP IN MIND FROM THE EVALUATION CRITERIA

1. Projects (& applicants) will need to meet **eligibility, selection and award criteria** that are refined in calls for proposals.

2. Each project will be **assessed individually** against a pre-defined set of award criteria to derive a **final point score.**

3. Applicants need to demonstrate in their CBA how the proposed action will meet the evaluation criteria. **The more detail** provided on the elements **the better.**



4. Most criteria will be assessed for all application steps, though with **increasing degree of rigidity and** need for **quantification.**

Source: Navigant

NAVIGANT

AGENDA FOR TODAY

Introduction	1:30 – 1:45	
Overview on renewables action in CEF	1:45 – 2:45	NAVIGANT
Application requirements (incl. CBA)	2:45 – 3:45	NAVIGANT
Coffee Break	3:45 – 4:00	
Eligibility, selection & award criteria	4:00 – 4:45	NAVIGANT
Selection process	4:45 – 5:15	NAVIGANT
Determination of **size of grants** for works	5:15 – 5:45	EY NAVIGANT
Wrap-up and next steps	5:45 – 6:00	

EACH CEF APPLICATION STAGE HAS A CLEARLY DEFINED SELECTION PROCESS

Stages

Prepara-tory Study	A **simple low-threshold approach**[1]	Not presented in detail
Status as c-b RES project	A **6-stage selection process** based on the revised CEF Regulation	Presented and open for feedback
Grants for technical studies	A **5-stage selection process** according to CEF selection practice	Presented for information only
Grants for works		

Temporal alignment of application stages is important …

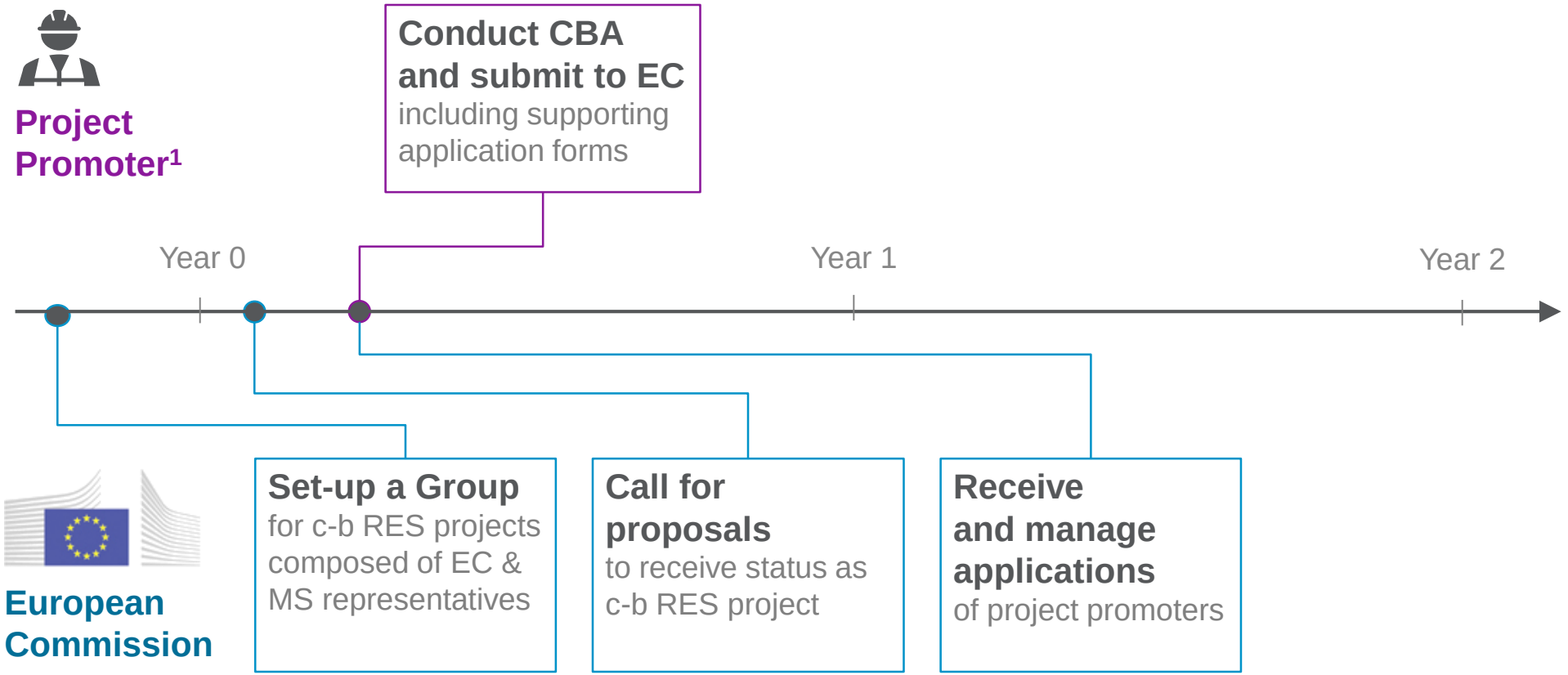
… to avoid delays and increase **effectiveness**

Source: Navigant | 1. For example, as part of a framework contract by the EC from which project promoters can receive funds to conduct such studies

SELECTION PROCESS FOR CROSS BORDER STATUS (I)

Application Stages

- Prepara-tory Study
- **Status as c-b RES project**
- Grants for technical studies
- Grants for works



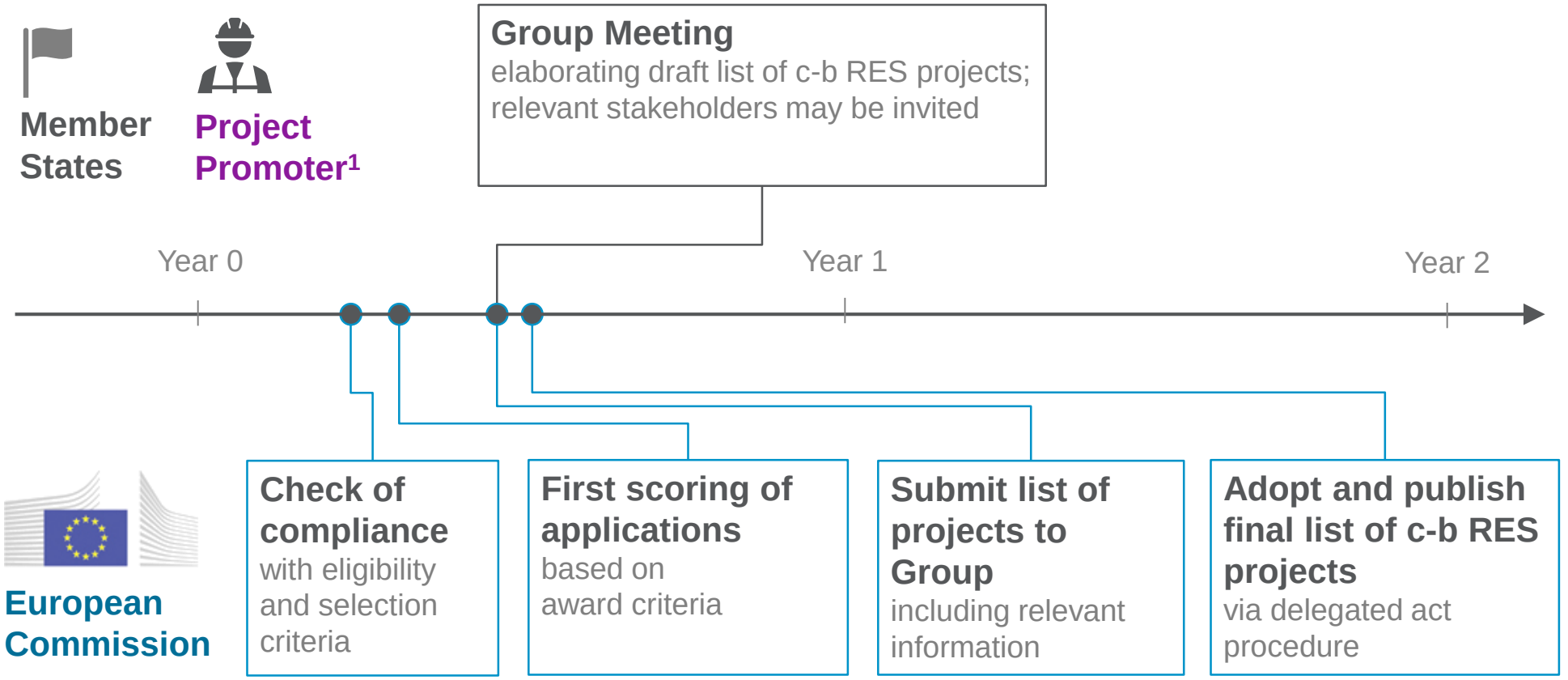
Source: Navigant | 1. May be private company or Member State

NAVIGANT

SELECTION PROCESS FOR CROSS BORDER STATUS (II)

Application Stages

- Prepara-tory Study
- **Status as c-b RES project**
- Grants for technical studies
- Grants for works



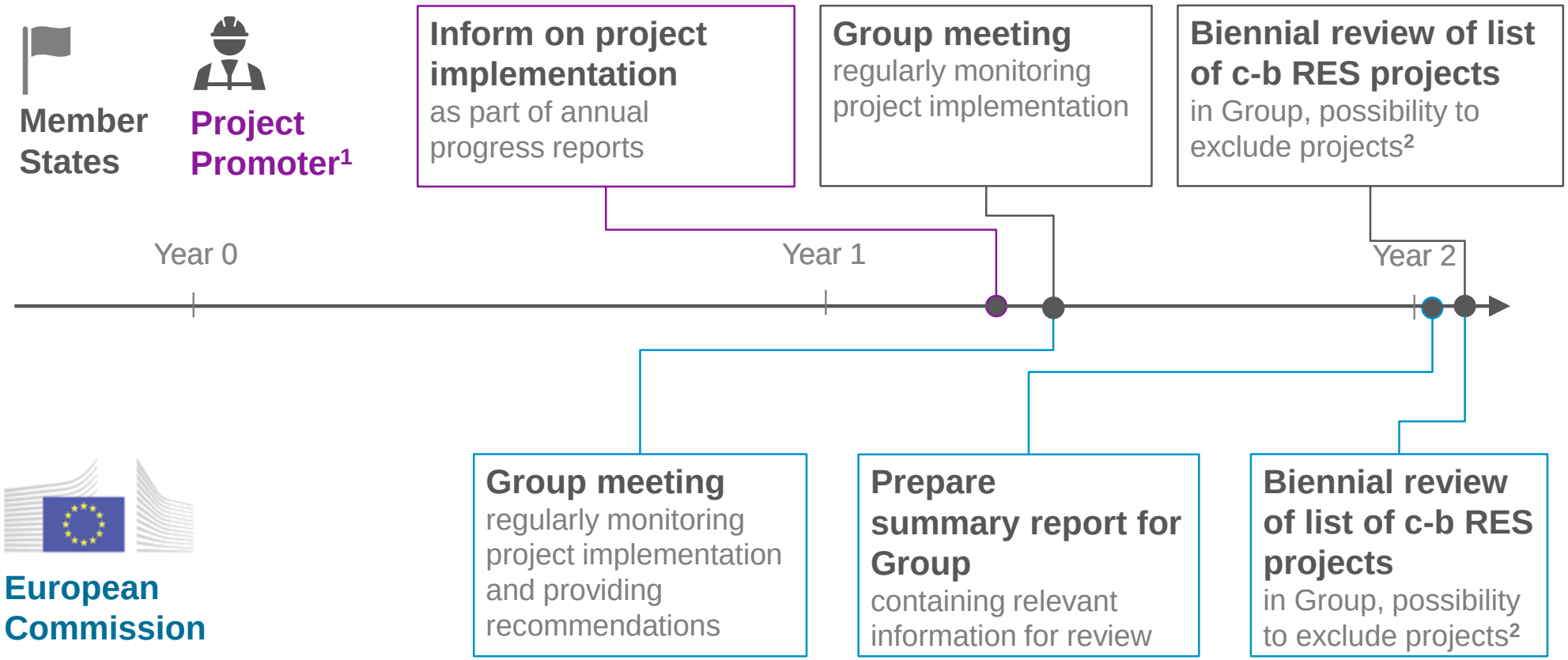
Source: Navigant | 1. May be private company or Member State

NAVIGANT

SELECTION PROCESS FOR CROSS BORDER STATUS (III)

Application Stages

- Prepara-tory Study
- **Status as c-b RES project**
- Grants for technical studies
- Grants for works



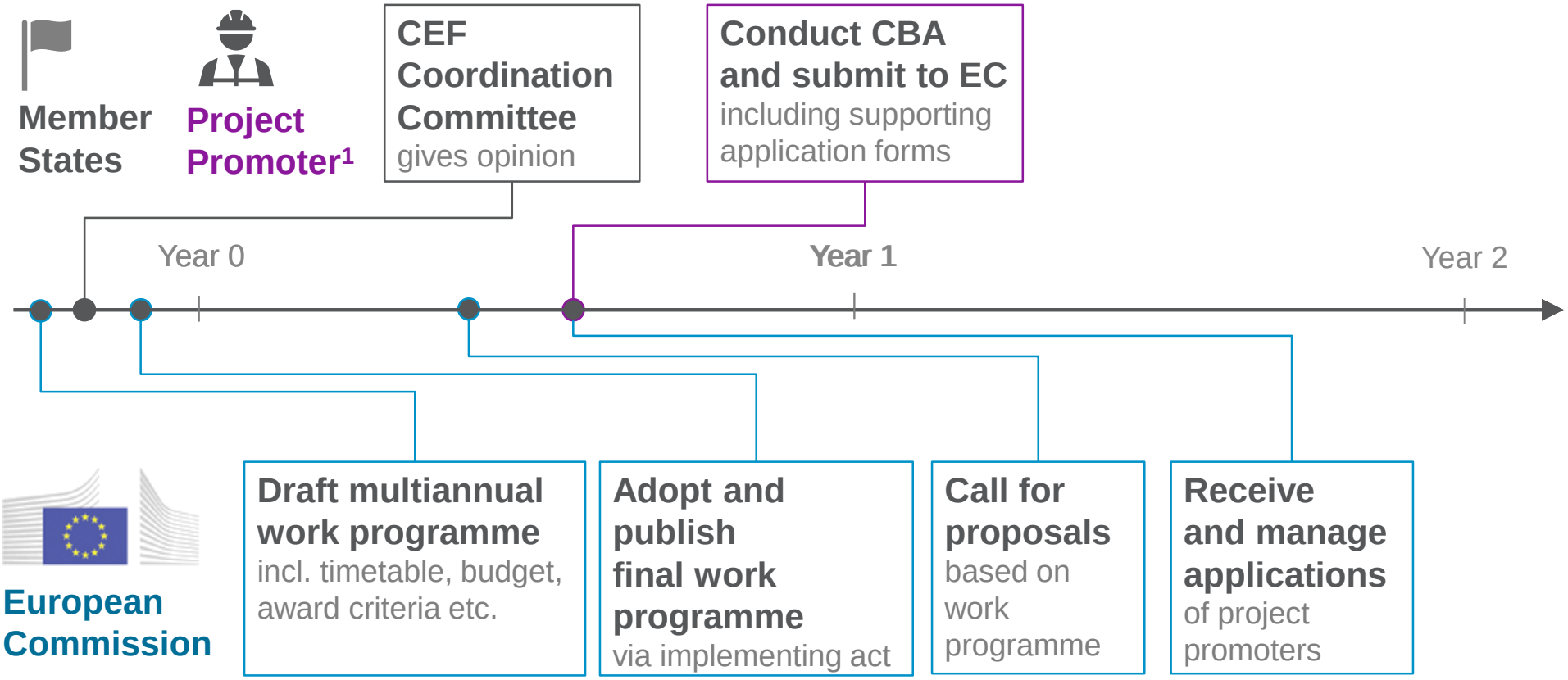
Source: Navigant | 1. May be private company or Member State; 2. Criteria for the exclusion from the list: False information provided by the applicant, major changes in the project design that makes project ineligible or that requires a re-evaluation, project has been completed or has already received cross-border RES funding from CEF, project is not being pursued any longer, project does not comply with EU legislation.

NAVIGANT

SELECTION PROCESS FOR GRANTS FOR STUDIES AND GRANTS FOR WORKS (I)

Application Stages

- Prepara-tory Study
- Status as c-b RES project
- **Grants for technical studies**
- **Grants for works**



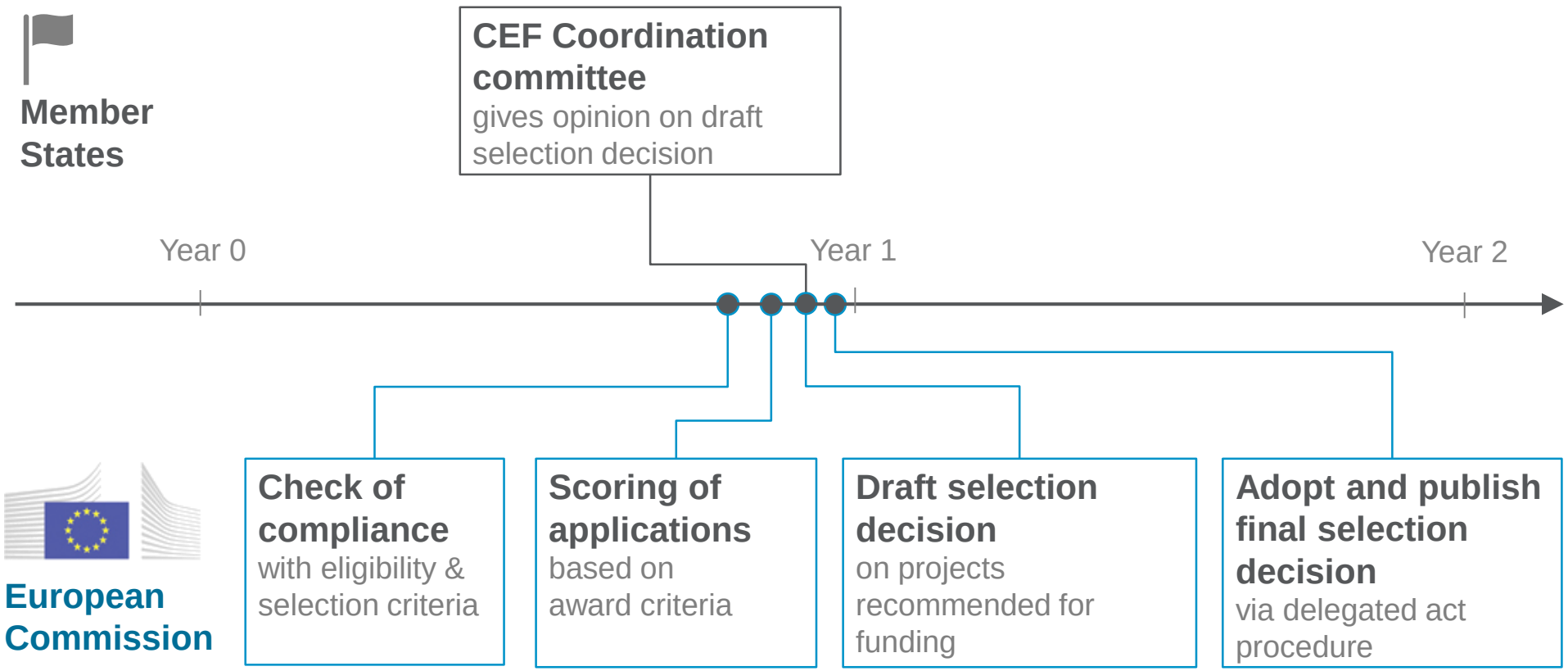
Source: Navigant | 1. May be private company or Member State

NAVIGANT

SELECTION PROCESS FOR GRANTS FOR STUDIES AND GRANTS FOR WORKS (II)

Application Stages

- Prepara-tory Study
- Status as c-b RES project
- **Grants for technical studies**
- **Grants for works**



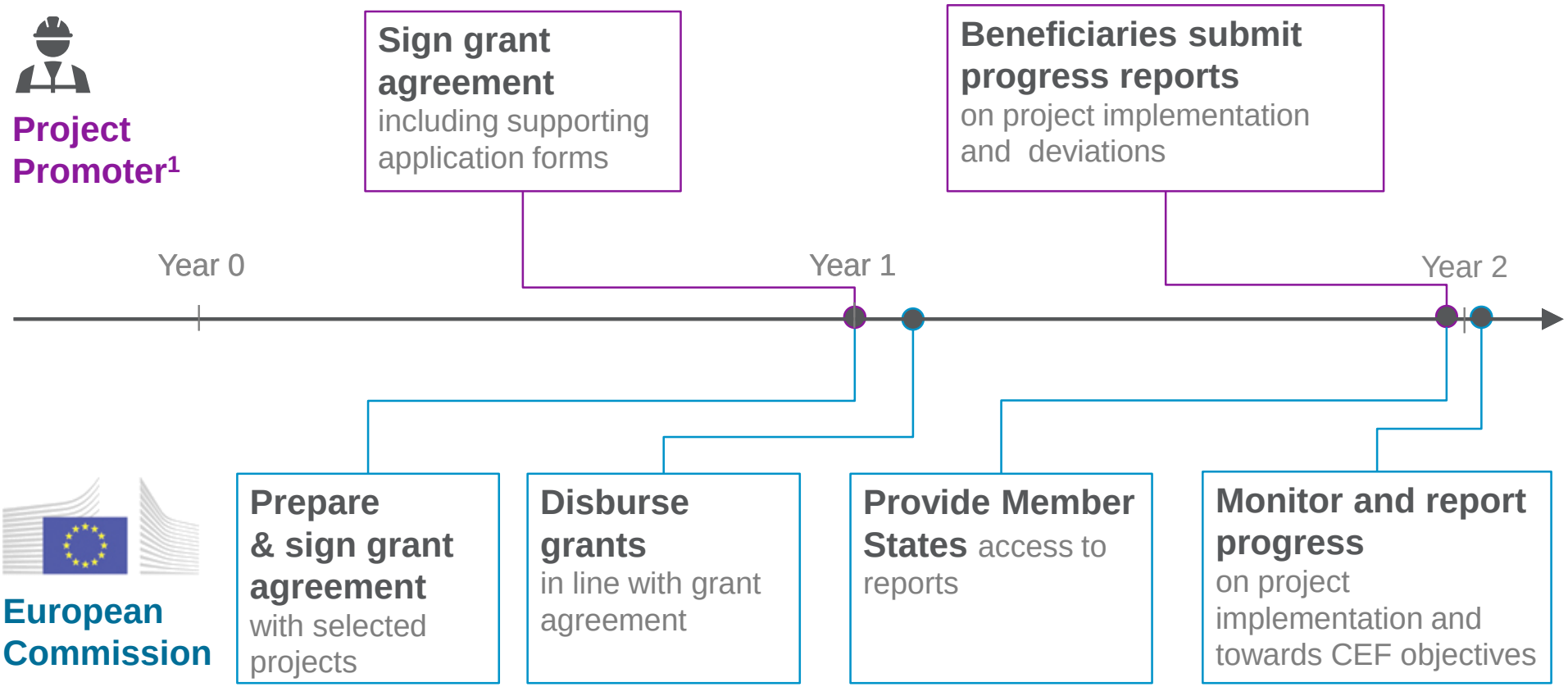
Source: Navigant

NAVIGANT

SELECTION PROCESS FOR GRANTS FOR STUDIES AND GRANTS FOR WORKS (III)

Application Stages

- Prepara-tory Study
- Status as c-b RES project
- **Grants for technical studies**
- **Grants for works**



Source: Navigant | 1. May be private company or Member State

NAVIGANT

TWO SEPARATE SELECTION PROCESSES FOR C-B RES STATUS AND GRANTS, BUT…

… applicants may have the possibility to **jointly apply** for c-b RES status and grants, and

… the **temporal alignment** of the two selection processes allows for an application for the status and grants for works or studies **within one year**

Source: Navigant

AGENDA FOR TODAY

Introduction	1:30 – 1:45	
Overview on renewables action in CEF	1:45 – 2:45	NAVIGANT
Application requirements (incl. CBA)	2:45 – 3:45	NAVIGANT
Coffee Break	3:45 – 4:00	
Eligibility, selection & award criteria	4:00 – 4:45	NAVIGANT
Selection process	4:45 – 5:15	NAVIGANT
Determination of **size of grants** for works	5:15 – 5:45	EY NAVIGANT
Wrap-up and next steps	5:45 – 6:00	

THE FINANCIAL ANALYSIS OF THE CBA FULFILLS FOUR FUNCTIONS

Application Elements	1-4 Project Description	5 Cooperation Mechanism	6 Added value	7 Economic analysis	**8 Financial analysis**	9 Risk assessment

		Key Question	*Relevance to CEF*
1	Assessing **Commercial Viability**	Is the project profitable **without EU support?**	Project needs to be **unprofitable** to be eligible for grants for works
2	Quantifying **Amount of Grants**	How much **support** would the project receive from EU funds?	**Project selection** is based on amount of grants (amongst other factors)
3	Calculating **Co-financing rate**	What **share of eligible costs** would CEF finance?	CEF grant **cannot exceed 50%** of eligible costs
4	Examining **Financial Sustainability**	Does the project have **enough cash** secured at all times?	Project must be **financially sustainable** to be eligible for grants for works

Source: Navigant, EY

COMMERCIAL VIABILITY ASSESSED THROUGH DISCOUNTED CASH FLOW ANALYSIS

1 **Commercial Viability**

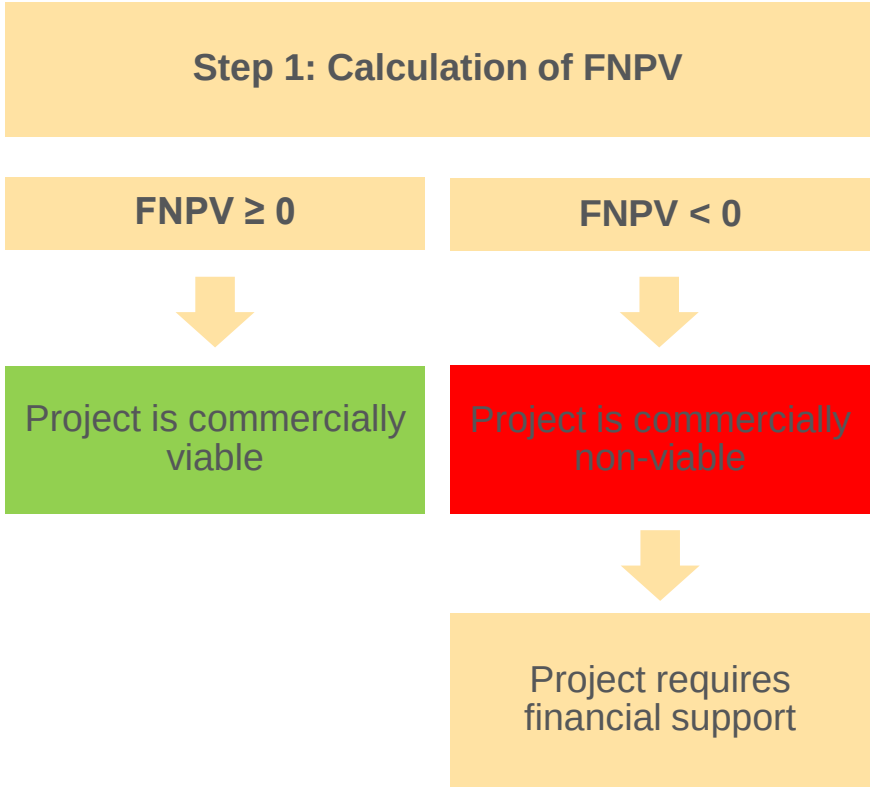
2 Amount of Grants

3 Co-financing rate

4 Financial Sustainability

Evaluation of commercial viability:

- Projection of project cash flows over corresponding reference period
- Discount rate may be chosen to reflect industry and country specifics – by default, rate of 4%[1]
- The final evaluation based on financial net present value (FNPV)



Source: Navigant, EY | 1. according to DG REGIO CBA guideline

NAVIGANT

FINANCIAL CASH FLOWS COMPRISING ALL CASH INFLOWS AND OUTFLOWS

1 **Commercial Viability**

2 Amount of Grants

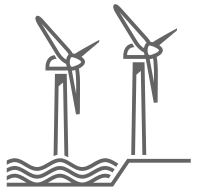
3 Co-financing rate

4 Financial Sustainability

Items included in the financial cash flow

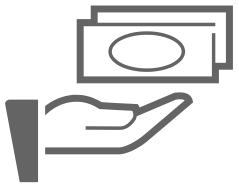
Inflows

Operating revenues



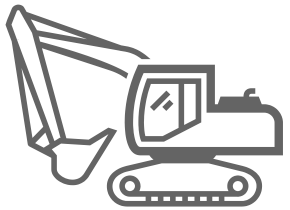
Residual value

National support programmes (tariffs, etc.)

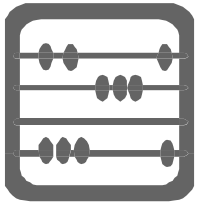


Outflows

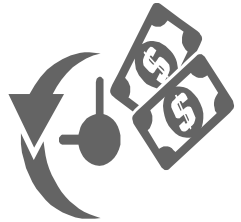
Capital expenditures



Operating costs



Replacement costs



Source: Navigant, EY

NAVIGANT

FINANCIAL CASH FLOW DEVELOPMENT OVER THE PROJECT'S LIFE CYCLE

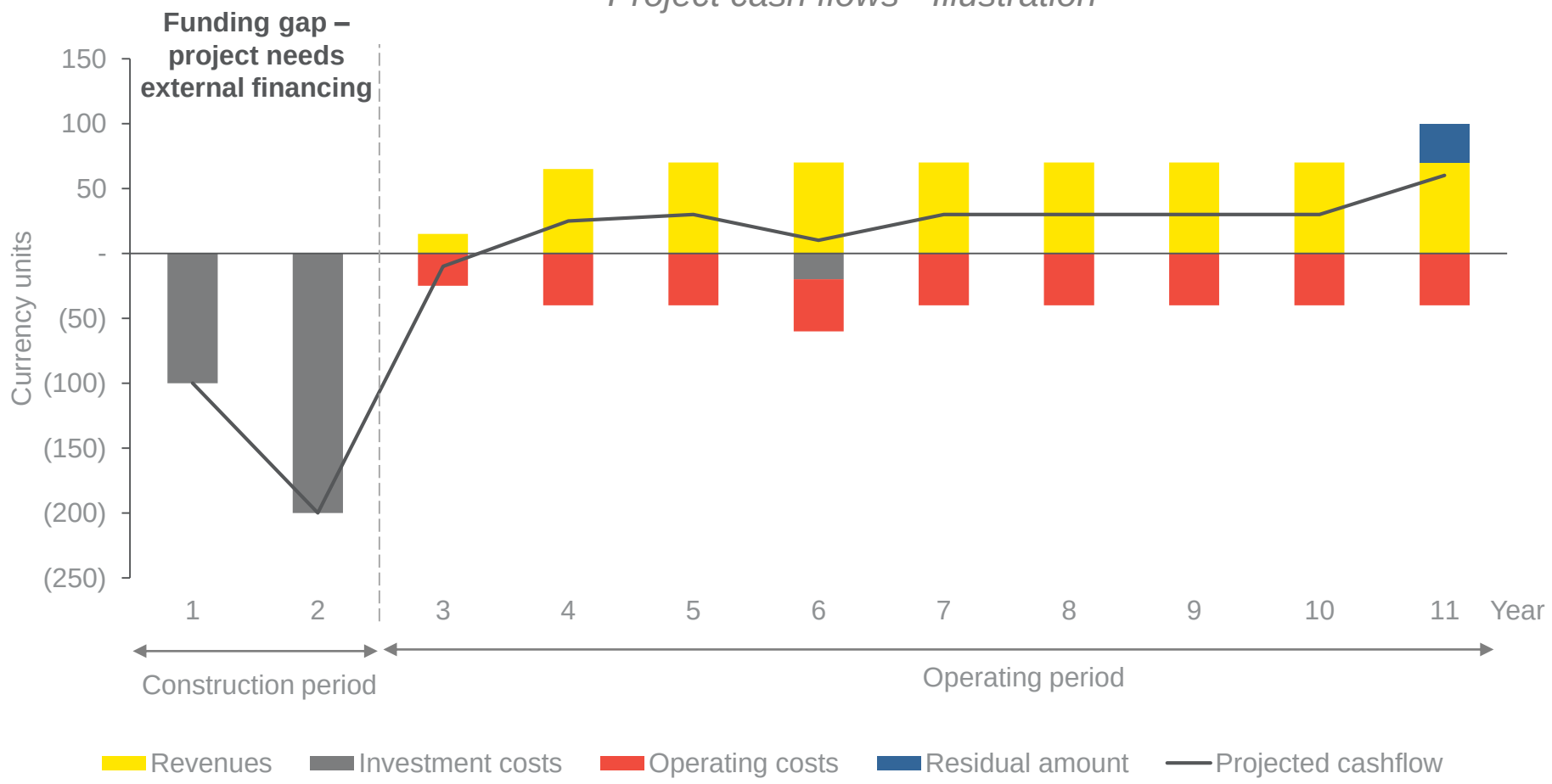
1 **Commercial Viability**

2 Amount of Grants

3 Co-financing rate

4 Financial Sustainability

Project cash flows - Illustration



Source: Navigant, EY

NAVIGANT

GRANTS TO BE QUANTIFIED WITH ALL COSTS NEEDED FOR PROJECT REALIZATION

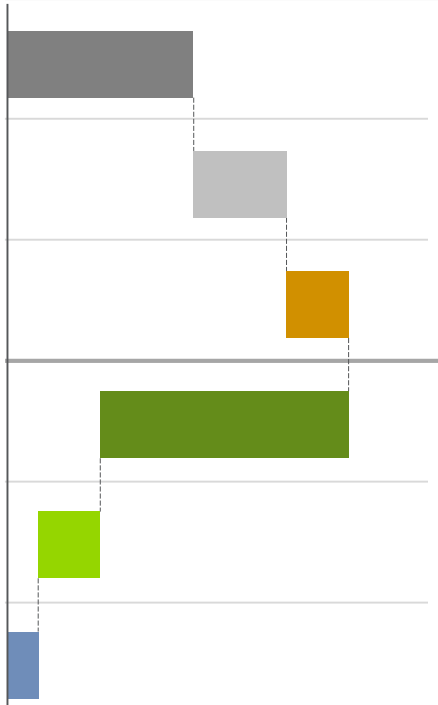
1 Commercial Viability

2 **Amount of Grants**

3 Co-financing rate

4 Financial Sustainability

Project revenues and expenditure



Total expenditure	Capex	Depreciable assets, e.g. installations & equipment
	Cost of capital	E.g. debt service, dividend payouts
	Opex	E.g. maintenance, land lease, salaries
Total revenues	Market revenues	Energy sales, possibly ancillary services
	Non-CEF support payments	E.g. national support schemes, other EU funds
	CEF grant for works	**Calculated to fill the funding gap**

Source: Navigant, EY

NOT ALL COSTS ARE ELIGIBLE UNDER CEF

1 Commercial Viability

2 Amount of Grants

3 **Co-financing rate**

4 Financial Sustainability

Eligible expenditure must…[1]

- actually be incurred by beneficiary
- be necessary for implementation
- be directly linked to the project
- be incurred during project period
- be reasonable & justified

Ineligible expenditure includes:[1]

- Reckless expenditure
- Deductible VAT
- Indirect costs
- Debt service
- Return on capital

Source: Navigant, EY, EC | 1. According to CEF Energy general model agreement: April 2017

NAVIGANT

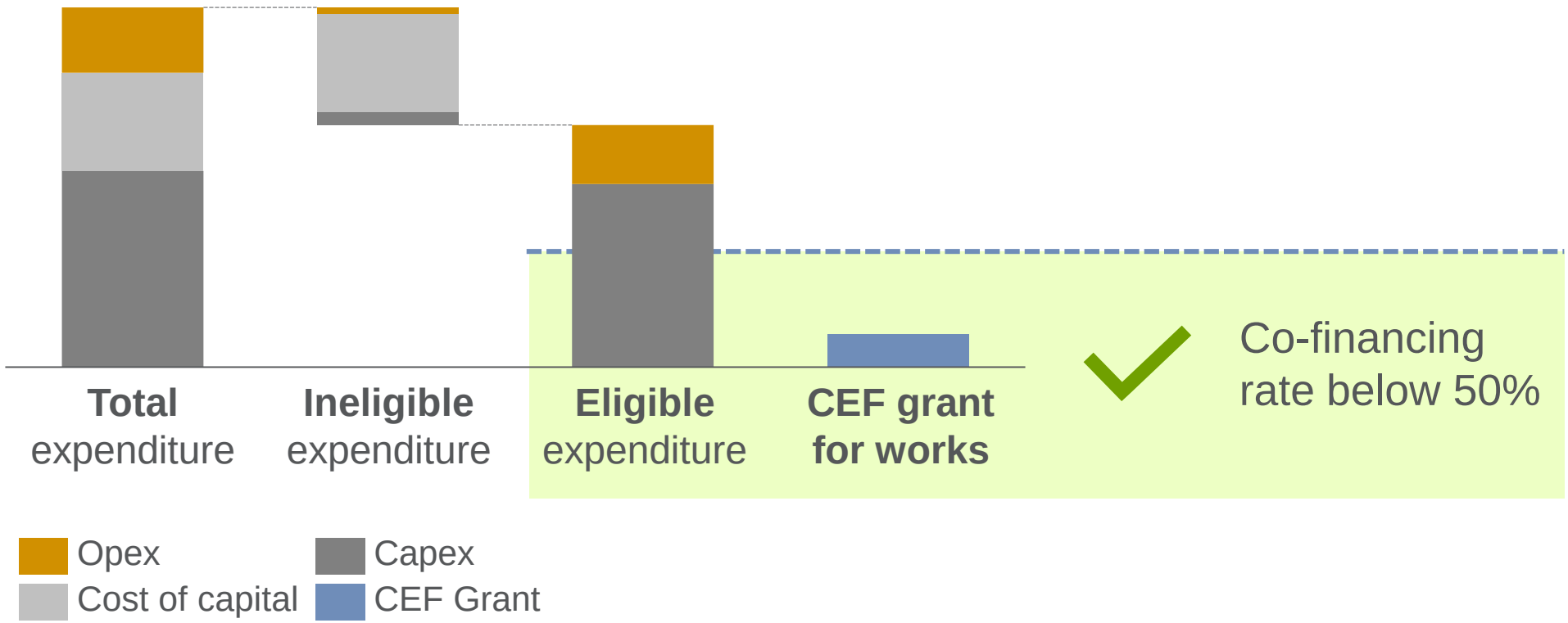
CO-FINANCING RATE TO BE CALCULATED ON THE BASIS OF ELIGIBLE COSTS

1 Commercial Viability

2 Amount of Grants

3 **Co-financing rate**

4 Financial Sustainability



Source: Navigant, EY | 1. According to CEF Multi-Beneficiary Model Grant Agreement (JUST/CEF-TC-2018-CSP-ECODEX)

NAVIGANT

FINANCIAL SUSTAINABILITY IS EXAMINED ON A YEAR-TO-YEAR BASIS

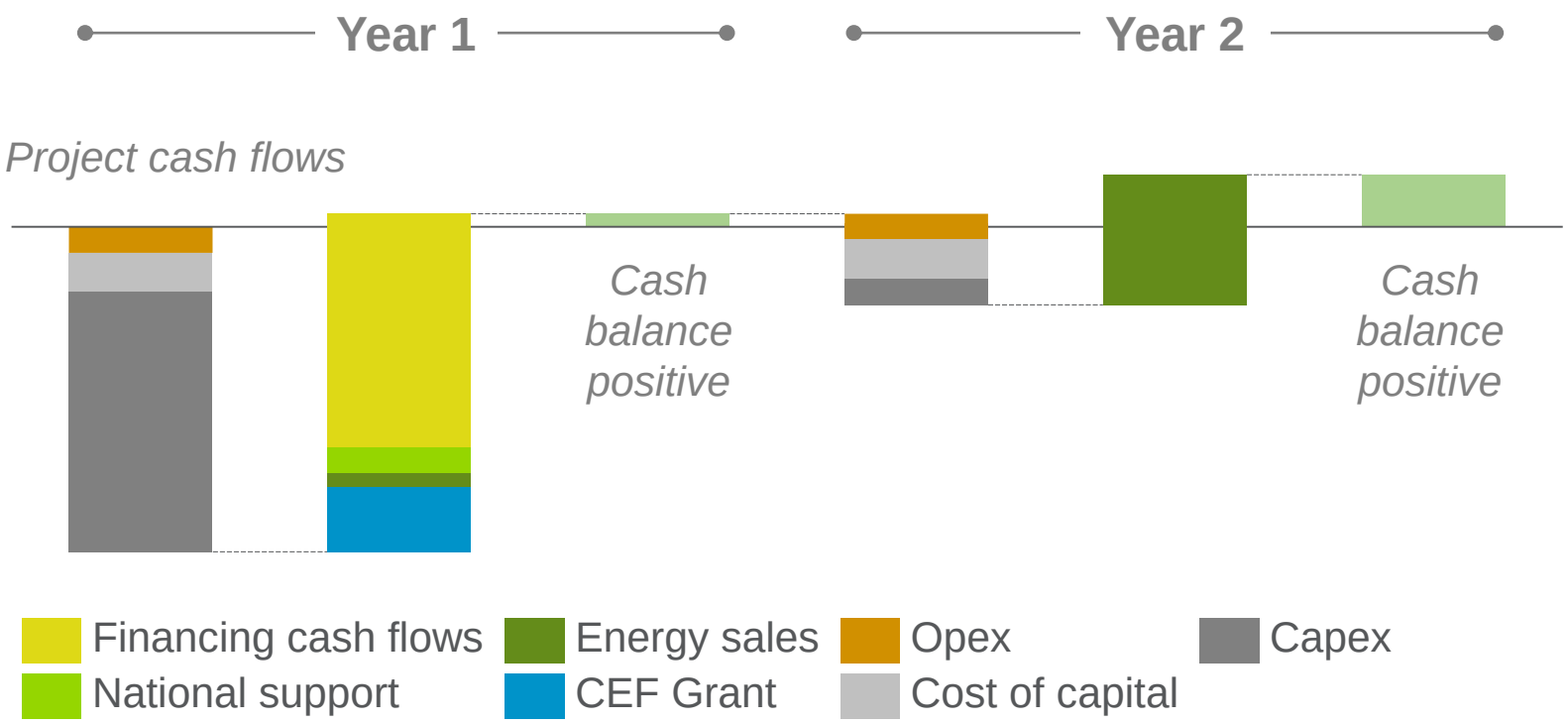
1 Commercial Viability

2 Amount of Grants

3 Co-financing rate

4 **Financial Sustainability**

CEF needs to make sure **projects will not run out of cash** and fail

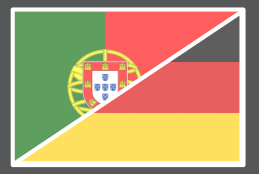


… for every year over full project lifetime

Source: Navigant, EY

NAVIGANT

CASE STUDY EXAMPLE PASSES ALL STEPS OF THE FINANCIAL ANALYSIS



Application Elements	1-4 Project Description	5 Cooperation Mechanism	6 Added value	7 Economic analysis	**8 Financial analysis**	9 Risk assessment

1	Assessing **Commercial Viability**	Discounted negative cash flows: 133 M€ Discounted positive cash flows: 116 M€ → **FNPV: -17 M€**	***Eligibility criterion fulfilled***	✓
2	Quantifying **Amount of Grants**	Total project expenditure: 201 M€ Project market revenue: 149 M€ Support paid by Germany: 27 M€	***Grant size: 25 M€*** *(if awarded)*	
3	Calculating **Co-financing rate**	Eligible project expenditure: 138 M€ Grant size: 25 M€ → **Co-financing rate of 18%**	***Compliant with max. co-financing rates***	✓
4	Examining **Financial Sustainability**	Project developer contributes equity and has secured a long-term syndicated loan and a revolving credit facility	***Cash balance positive at all times***	✓

Source: Navigant, EY

FOUR THINGS TO KEEP IN MIND FROM THE FINANCIAL ANALYSIS

8 Financial analysis

The project's **cash balance** must be positive at all times

CEF grants only cover up to 50% of **eligible cost**[1]

Project must be **unprofitable** without CEF grant

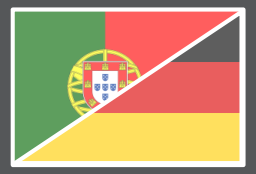
CEF grant is the **last gap-filler** needed for project realization

Source: Navigant, EY | 1. Other half and non-eligible costs must be covered by market revenues or other support schemes.

AGENDA FOR TODAY

Introduction	1:30 – 1:45	
Overview on renewables action in CEF	1:45 – 2:45	NAVIGANT
Application requirements (incl. CBA)	2:45 – 3:45	NAVIGANT
Coffee Break	3:45 – 4:00	
Eligibility, selection & award criteria	4:00 – 4:45	NAVIGANT
Selection process	4:45 – 5:15	NAVIGANT
Determination of **size of grants** for works	5:15 – 5:45	EY NAVIGANT
Wrap-up and next steps	5:45 – 6:00	

THE PROJECT PROMOTER IN THE CASE STUDY WAS SUCCESSFUL



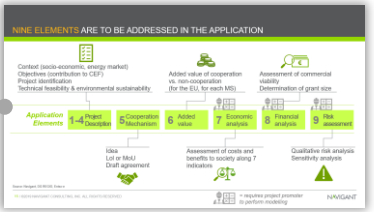
Application for CEF funding

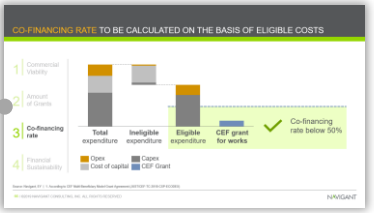
100 MW CSP Plant with storage submits applications to CEF to ultimately receive **grants for works**

Cost-Benefit Analysis

Project presents all **9 elements of CBA** with increasing granularity, e.g.:

- **Cooperation mechanism:** a joint project between Germany & Portugal (Art. 9 REDII)
- **Added value to EU**, increased policy coordination & use of innovative technology
- **Economic analysis** yields an overall benefit to the society
- **Financial analysis** determines grant at €25 million; project is financially sustainable
- **Risk are assessed**, risk mitigation plan e.g. for permits is developed

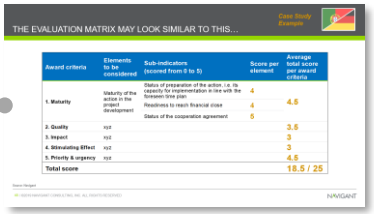




Project is evaluated

Project complies with applicable **eligibility** and **selection criteria**

Project receives **score of 18.5/25 points** and ≥3 points in each award criterion



Award of CEF grant

Project is **awarded a €25M grant** for works on the basis of this evaluation

Project promoter receives grant and **CSP plant with storage is built**

NAVIGANT

CONTACTS

CORINNA KLESSMANN
Director
corinna.klessmann@navigant.com

MALTE GEPHART
Associate Director
malte.gephart@navigant.com

FELIX VON BLÜCHER
Senior Consultant
felix.von.bluecher@navigant.com

BASTIAN LOTZ
Consultant
bastian.lotz@navigant.com

PHILIPP CREUTZBURG
Consultant
philipp.creutzburg@navigant.com

JONAS SCHRÖDER
Senior Consultant
jonas.schroeder@navigant.com

IZABELA KIELICHOWSKA
Managing Consultant
izabela.kielichowska@navigant.com

NAVIGANT