

Capacity Calculation and TYNDP Assessment Documentation



The Basics



ENTSO-G uses Capacities after Application of Lesser-Of Rule as the defining constraints when simulating its network model

Lesser-Of Rule takes the Operator Capacities as an input

- > For every Point, Arc, Infrastructure Level, and Year, the system calculates the total of entries and exits, and then selects the minimum value

Operator Capacities are built based on

- > Existing Capacity
- > Increments
- > System Enhancements

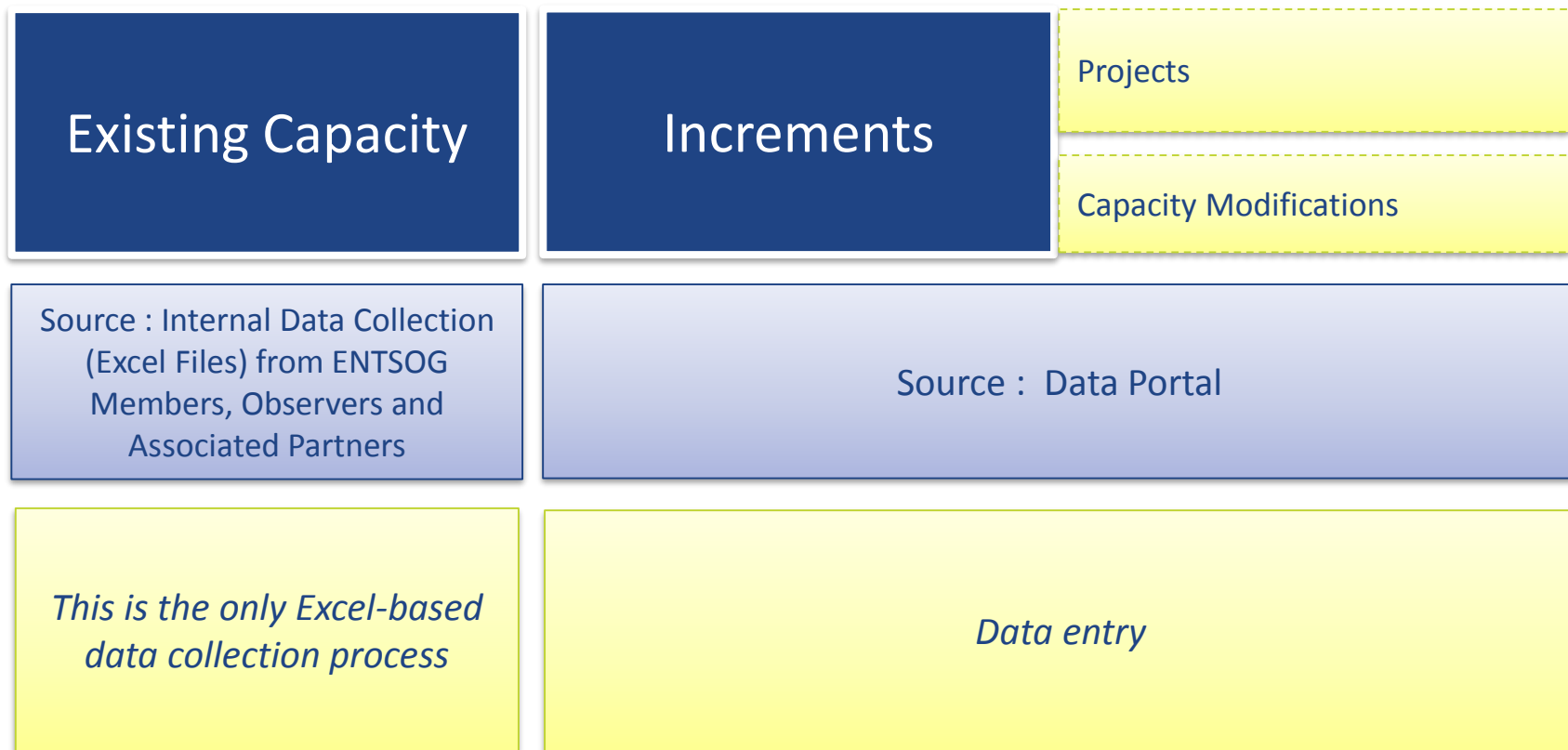
Two Specific Contexts

- > System & Infrastructure gaps assessment
- > Project-specific assessment (PS-CBA)

The process is going to be explained in the following slides



1. Build Operator Capacities

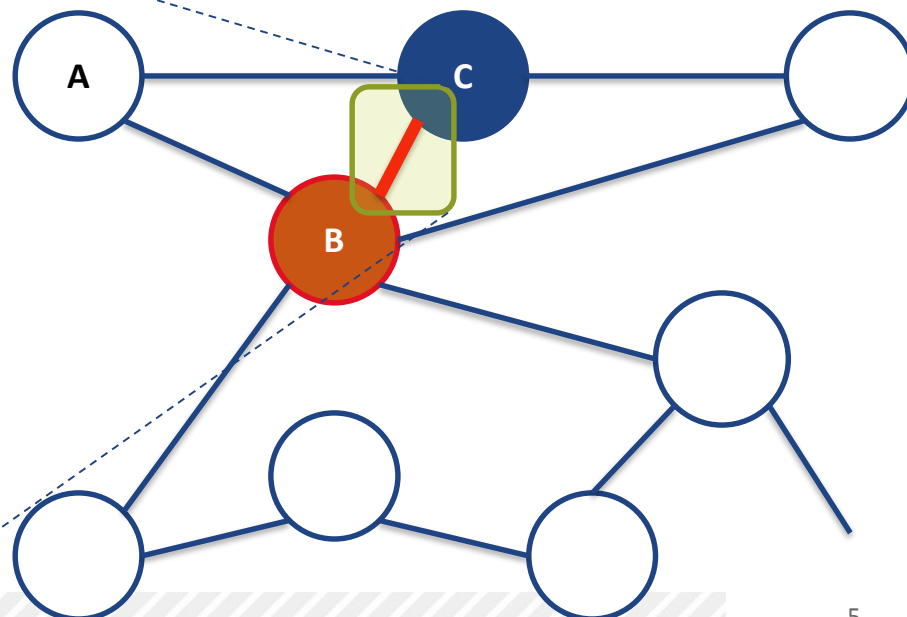
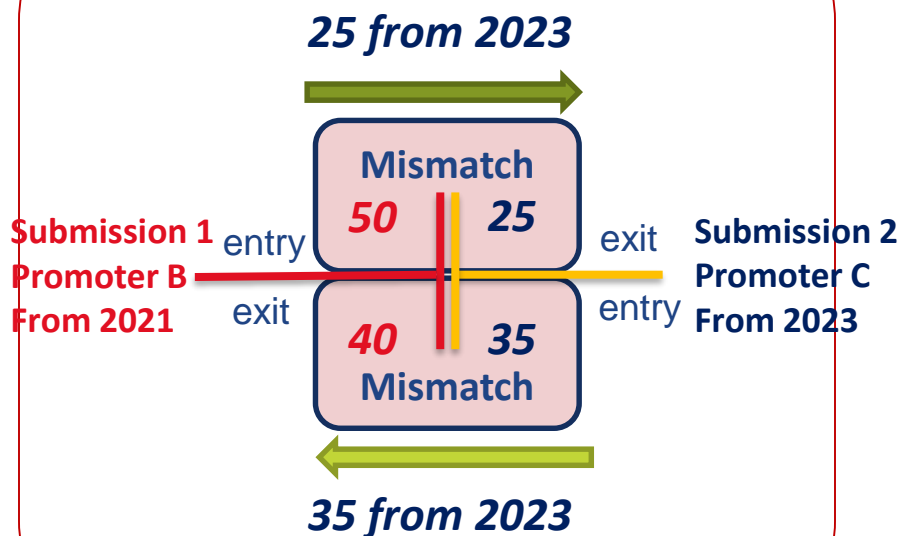




How does data submission translate into project assessment

- > The minimum information to enable the assessment of the Project are :
 - Interconnection Point (existing or new); Capacities; Commissioning Date; FID or ADVANCED status;
- > The “**lesser-of-rule**” will be applied on the capacities submitted by promoters

Point X between country **B** and **C**

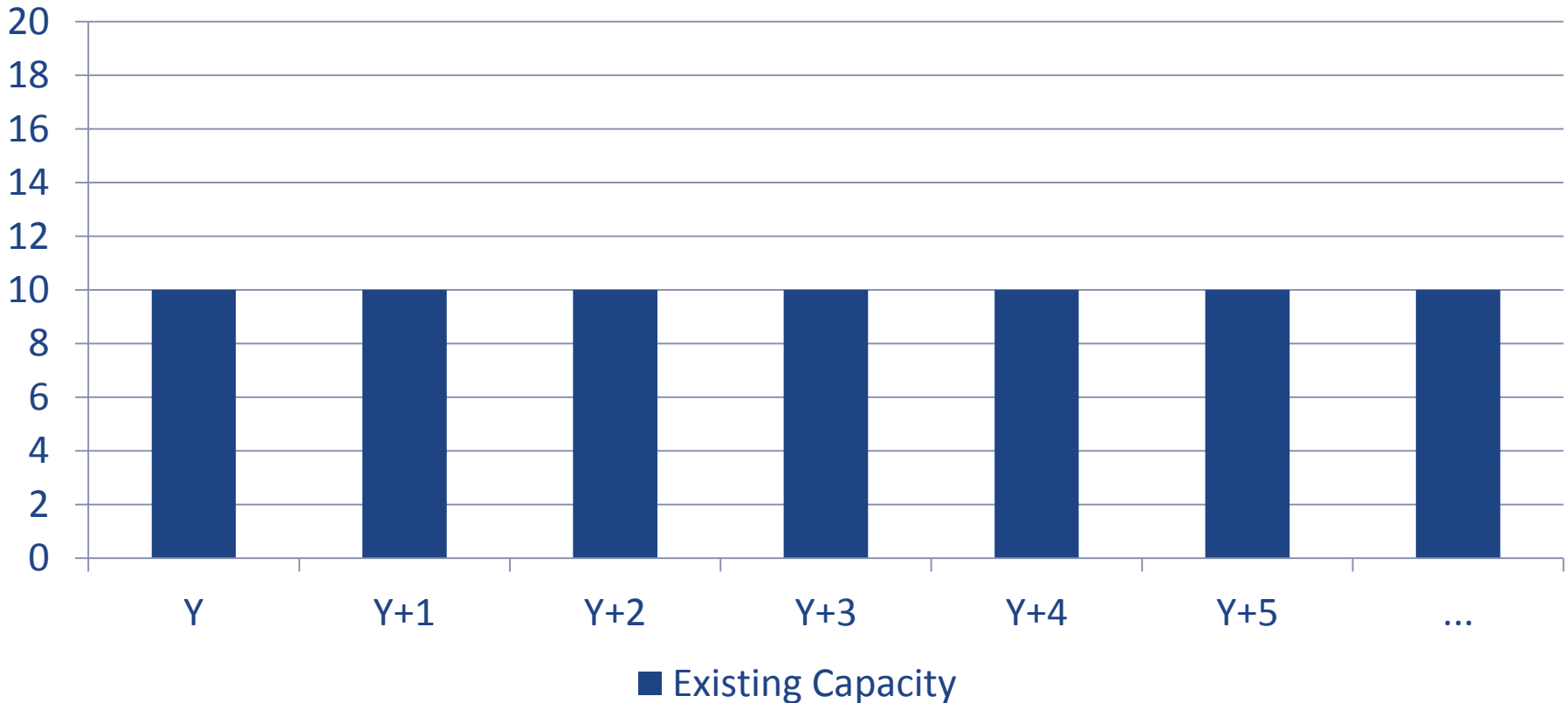




Operator A



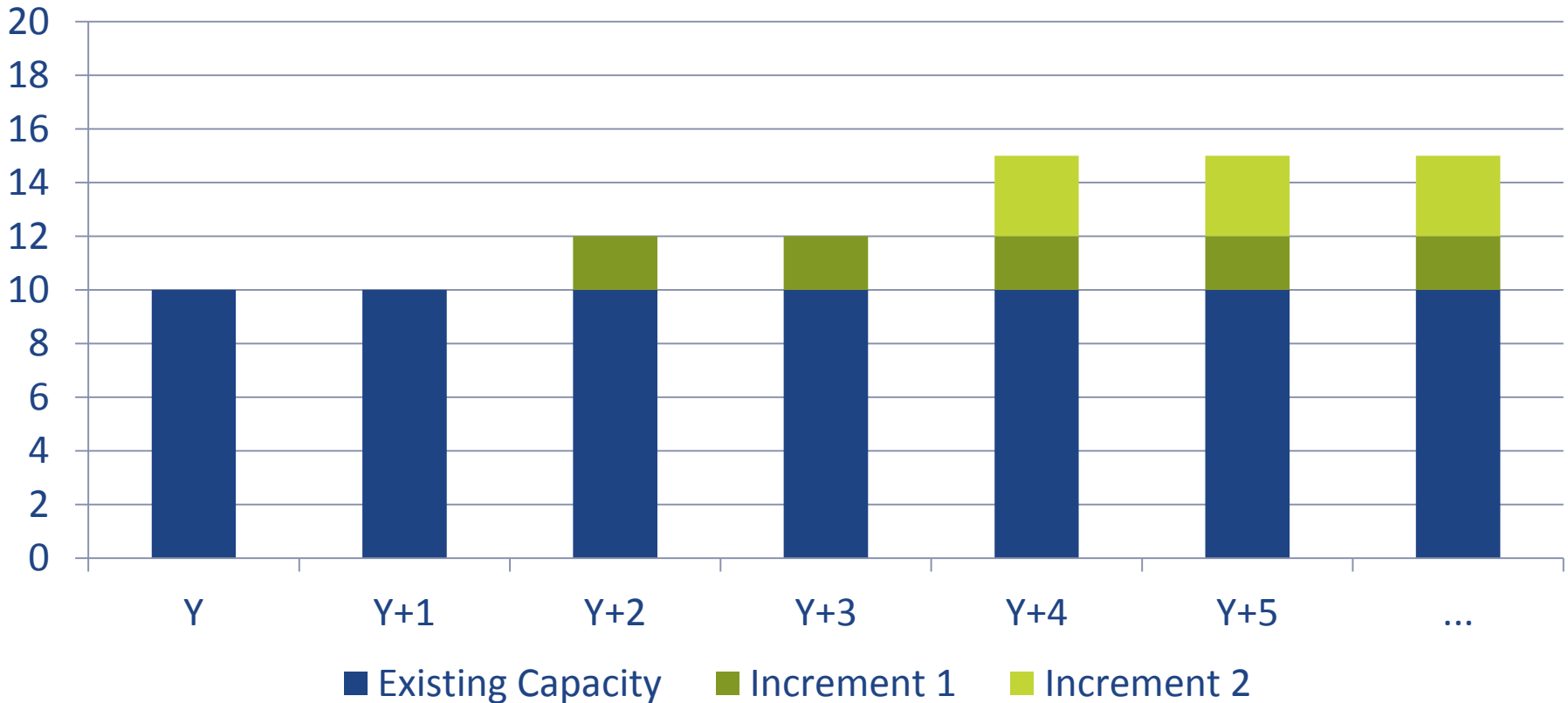
1. Initiate the Existing Capacity



The Existing Capacity is by definition constant over all the years covered by the TYNDP. This ensures that every change to the Operator Capacity can be traced back to a Project or a Capacity Modification.



2. Add the Increments



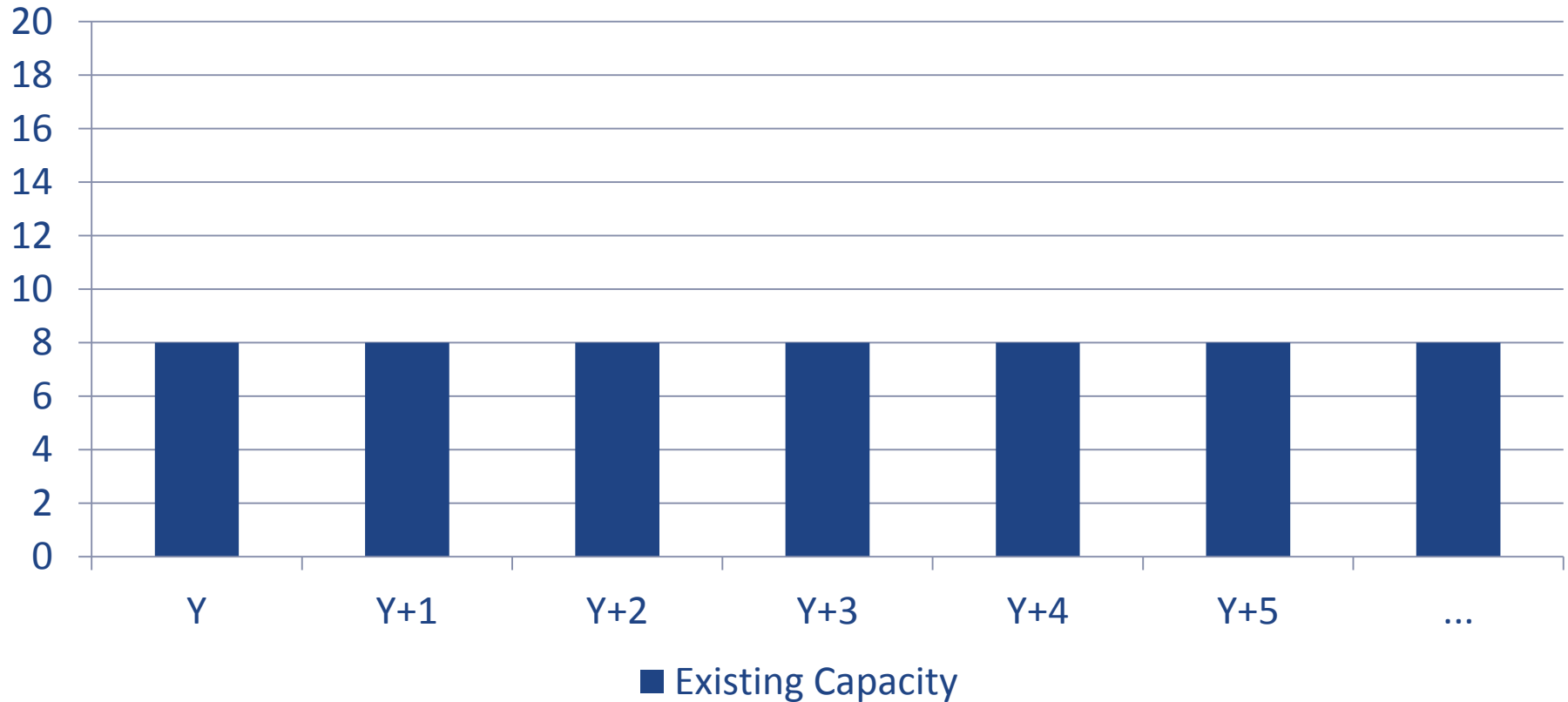
All the Increments submitted by the Promoter at this Point and in this Flow Direction are aggregated. An Increment commissioned during year Y is only considered as effective from Y+1.



Operator B

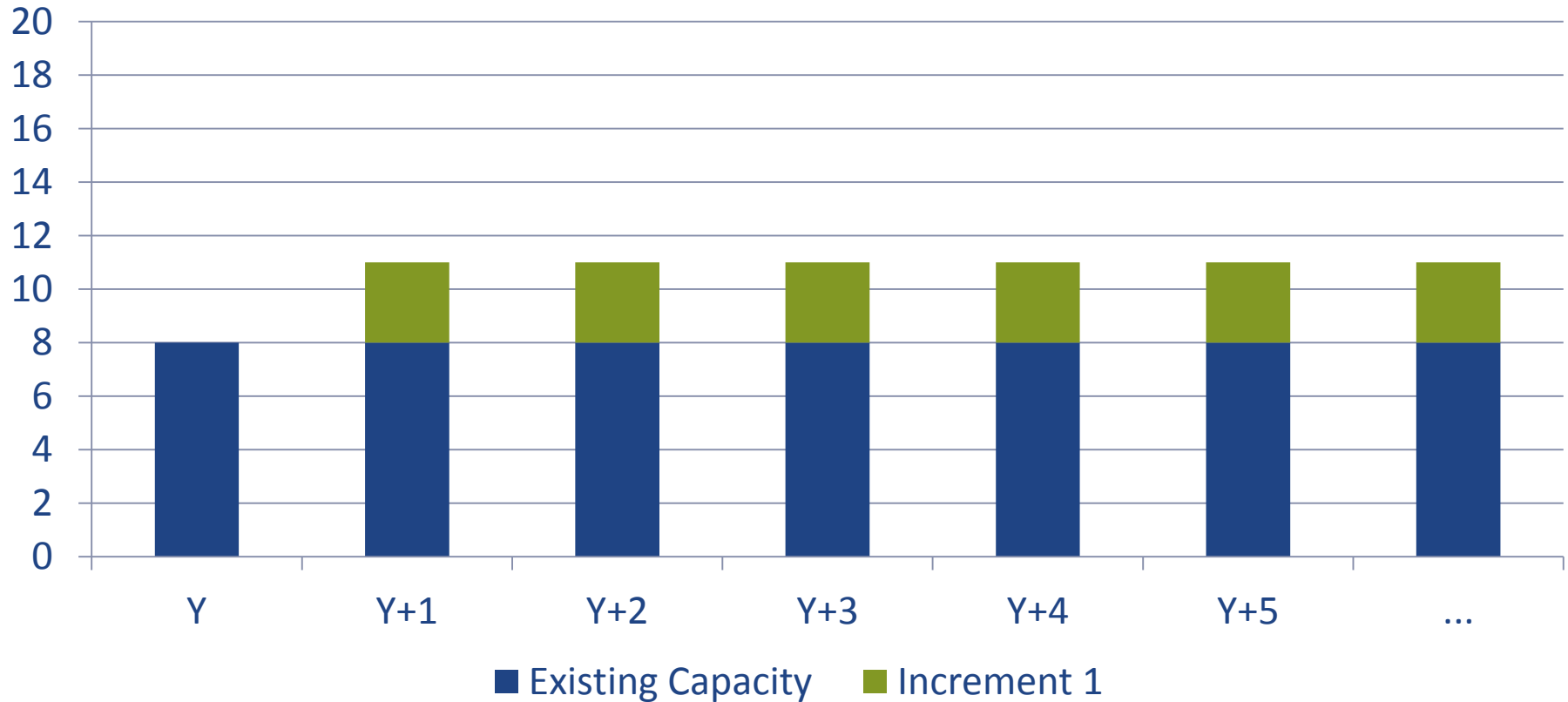


1. Initiate the Existing Capacity





2. Add the Increments

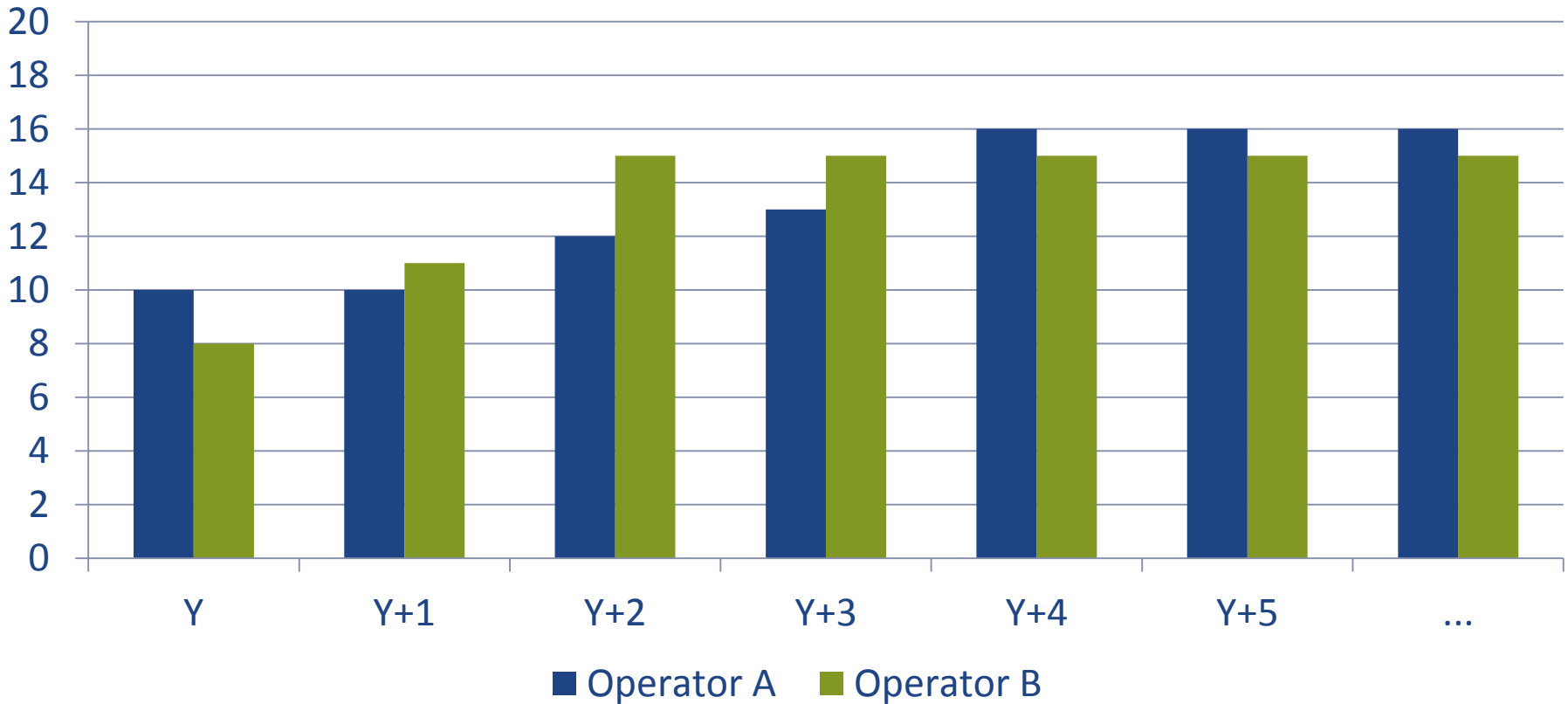




Resulting Operator Capacities



Result



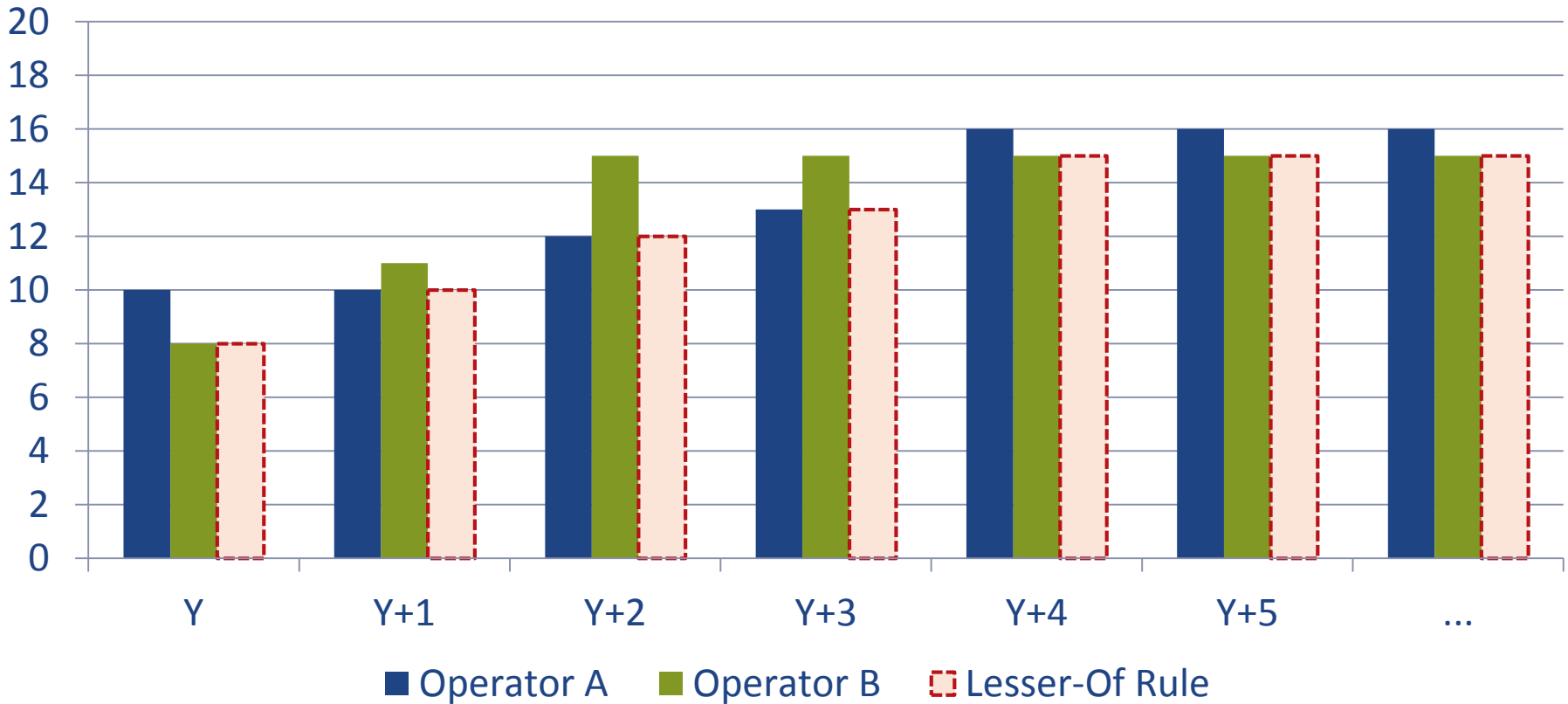
The previous aggregation procedure produces a profile of values for each operator, that can vary from year to year, for the whole period of the TYNDP.



Lesser-Of Rule Application



Result



For each year, the minimum value is then selected.



2. System & Infrastructure gaps assessment



Infrastructure Levels (1)

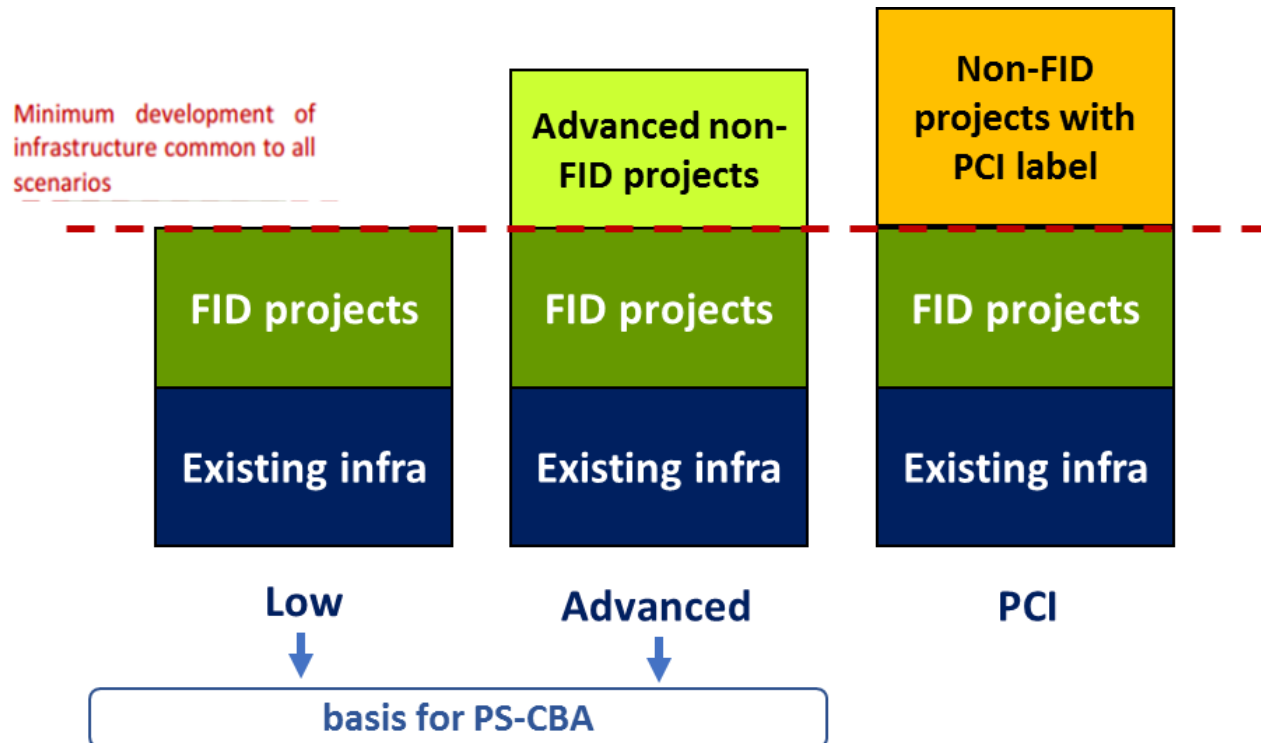


Context	Existing Capacity	Increments
FID	All	Only from FID projects
PCI	All	Only from FID projects or projects in the current legal PCI list
ADVANCED	All	Only from Advanced Projects



Infrastructure Levels (2)

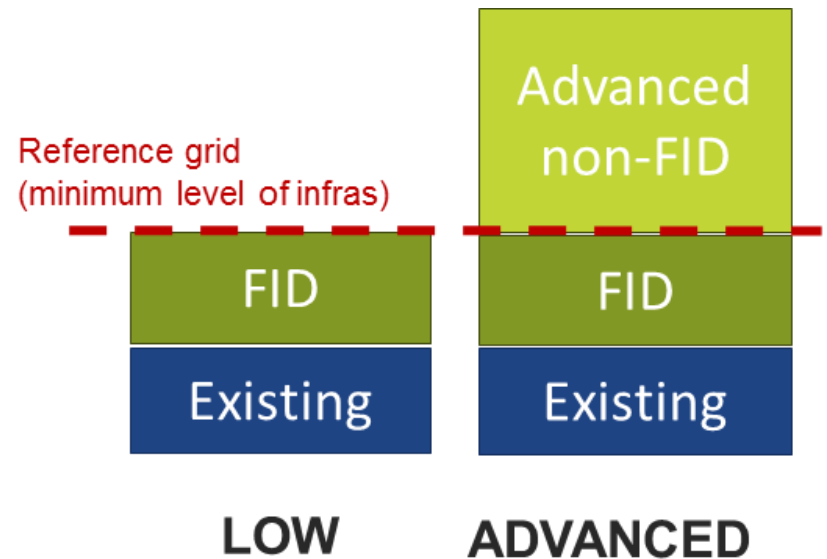
- Project status are a pre-requisite for the definition of the **infrastructure levels**
- An infrastructure level represents the **potential level of development of the European gas network system**





System & Infrastructure gaps assessment

- > An infrastructure level formed by existing infrastructure and projects with FID status (LOW infrastructure level) represents therefore a **credible minimum set of infrastructure**
- > The identification of **infrastructure gaps** is based on the LOW level
- > The assessment of the ADVANCED infrastructure level provide **complementary perspective** in the analysis of the European energy market



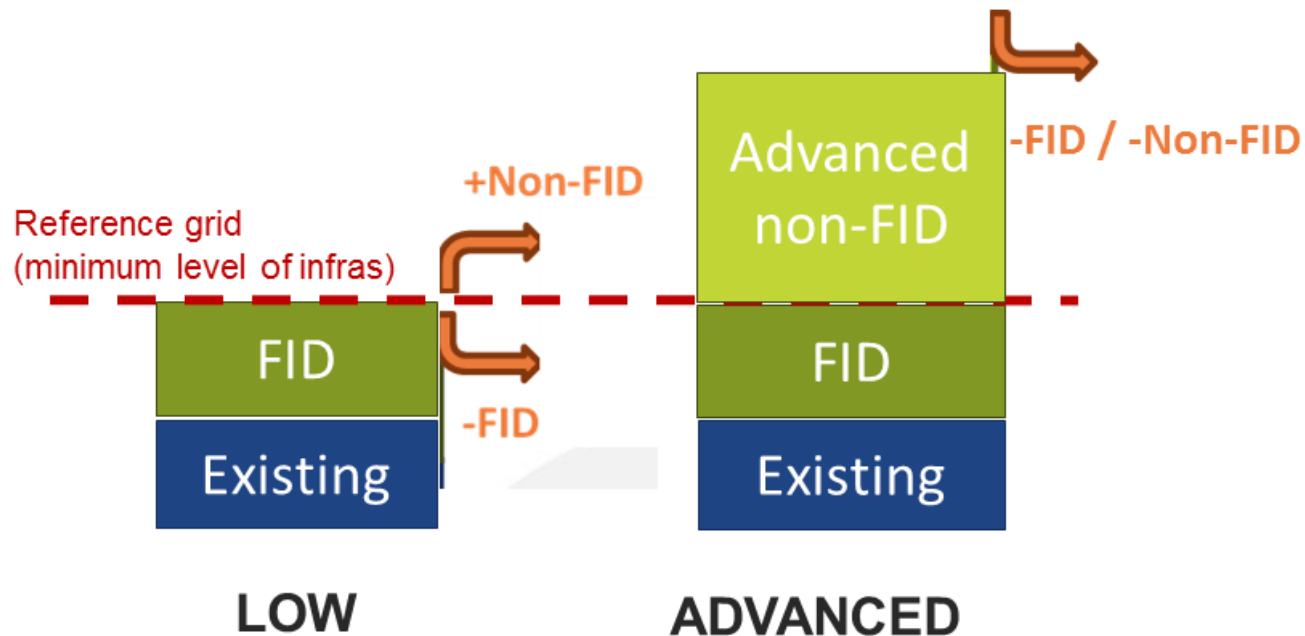


3. Project-specific assessment (PS-CBA)



Project-specific assessment (PS-CBA)

- > Based on its status, project-specific assessment is carried **with/without each project (or project group)** for both infra levels
- > It measures the **incremental impact in mitigating the identified infrastructure gaps** (based on the CBA Methodology 2.0)

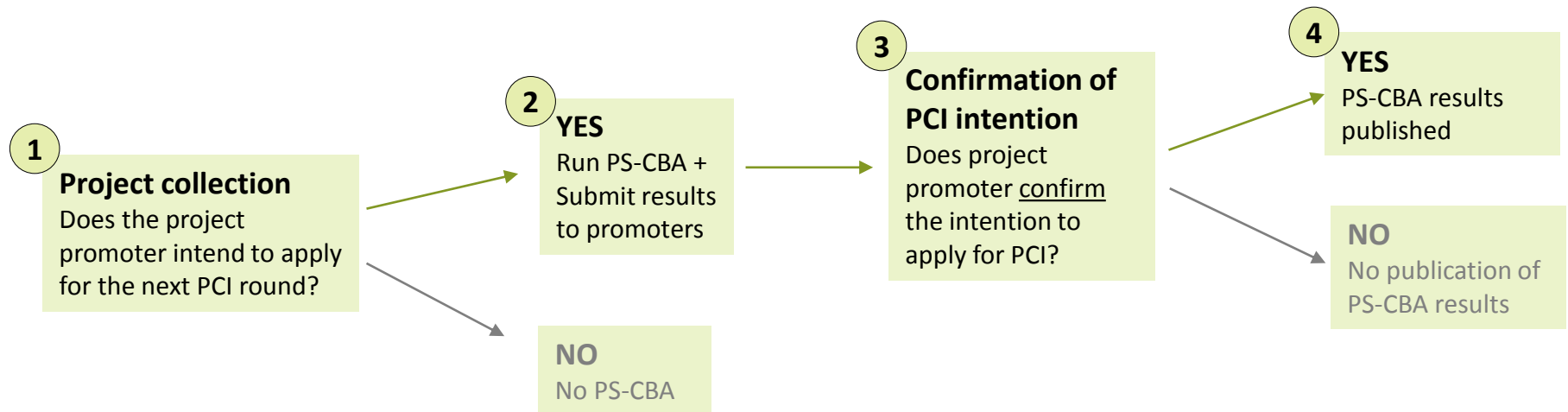


Grouping for project-specific assessment (PS-CBA)

- > Often, a number of functionally-related project items **need to be implemented for their benefit(s) to materialise or to be fully captured**
- > Grouping of projects represents therefore a **prerequisite** the for project-specific assessment
- > CBA Methodology (Annex 1 – link [here](#)) proposes guidelines to support the identification of **reasonable project groups**
- > ENTSOG will define the groups for PS-CBA based on the **most recent approved PCI List and the CBA Methodology guidelines**
- > Defined **project groups will be published** in line with ENSTOG TYNDP Guidelines

Project-specific assessment (PS-CBA) process in TYNDP 2018

- > ENTSOG CBA Methodology 2.0 proposes inclusion of the **project-specific assessment (PS-CBA)** in TYNDP and **publication of results in the TYNDP Report**



! PS-CBA will be run only on projects for which promoters have stated the intention to apply to PCI in point **1**



Thank You for Your Attention

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Useful links



- TYNDP 2017 page

<https://www.entsog.eu/publications/tyndp#ENTSOG-TEN-YEAR-NETWORK-DEVELOPMENT-PLAN-2017>

- TYNDP 2017 projects and documentation kit

<https://www.entsog.eu/public/uploads/files/publications/TYNDP/2017/ENTSOG%20TYNDP%202017%20Annex%20A%20-%20Infrastructure%20Projects.zip>

https://www.entsog.eu/public/uploads/files/publications/TYNDP/2016/TYNDP042-16%20Project%20Data%20Portal%20Documentation%20Kit_ver1_2.zip

- TYNDP 2018 page

<https://www.entsog.eu/publications/tyndp#ENTSOG-TEN-YEAR-NETWORK-DEVELOPMENT-PLAN-2018>

- TYNDP Implementation Guidelines

https://www.entsog.eu/public/uploads/files/publications/TYNDP/2017/TYNDP%202018_DRAFT_practical_implementation_guidelines.pdf

- CBA Methodology 2.0

<https://www.entsog.eu/publications/cba-methodology#2ND-CBA-METHODOLOGY>