

10th CA EED Plenary Meeting
WG10.3 session



LIFE
CLIMATE
PATH
2050

The Climate Action Mirror – Monitoring climate and energy policy implementation in Slovenia

Barbara Petelin Visočnik
Jožef Stefan Institute, Energy Efficiency Centre

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Projekt LIFE ClimatePath2050 (LIFE16 GIC/SI/000043)
je financiran iz finančnega mehanizma LIFE, ki ga
upravlja Evropska komisija, in iz Sklada za podnebne
spremembe Ministrstva za okolje in prostor RS.



Before the Climate Action Mirror

GHG emissions	Energy efficiency	Renewable energy	area
EU-ETS scheme / ESD	EED	RED	
<ul style="list-style-type: none"> national emissions inventory (SEA) biennial reports and national communications to UNFCCC (MESP) MMR reporting on the EU level (MESP) 	<ul style="list-style-type: none"> NEEAP annual progress reports (MI) 	<ul style="list-style-type: none"> biennial progress reports (MI) 	EU level
Operational Programme for Reducing GHG Emissions until 2020 (OP GHG) 2014	National energy efficiency action plan 2014–2020; 2017–2020 (NEEAP) Long-term strategy for energy renovation of buildings both 2015, 2017	National renewable energy action plan 2010–2020 2010	SLO level
<ul style="list-style-type: none"> annual reports on the implementation of the OP GHG – compliance with the GHG emissions target set by ESD (MESP) 	<ul style="list-style-type: none"> annual reports on the implementation of the NEEAP (MI, until 2018) 	<ul style="list-style-type: none"> biennial reports on the achievement of RED and CHP national targets (EA) 	

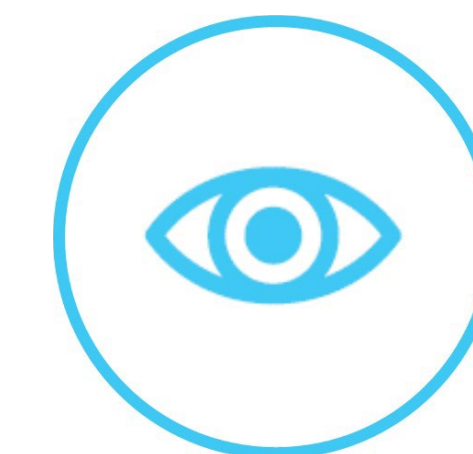
A lot of reporting, a lot of numbers.

But, to which extent do they improve the implementation of measures?

How to develop a monitoring system that would better support decision-making in the area of climate and energy policy implementation?

The Climate Action Mirror

(<https://podnebnapot2050.si/results-for-slovenia/annual-climate-action-mirror/?lang=en>)



- **Integrated national climate action monitoring system** for monitoring implementation of the climate mitigation measures – developed to improve upon the hitherto system for monitoring the OP GHG implementation
- Developed in 3 annual cycles (2018–2020); 30 parts online; 2020 edition with 11 parts (a summary report for decision-making, an assessment of target achievement, 5 sectoral parts, 3 measures in focus, GHG emissions in the EU-ETS sector)
- Prepared within the **LIFE ClimatePath2050** project (2017–2021)
 - Video with the project results
(<https://podnebnapot2050.si/watch-the-video-with-the-results-of-the-life-climatepath2050-project/?lang=en>)
 - Layman's report
(https://podnebnapot2050.si/wp-content/uploads/2022/03/LIFE_ClimatePath2050_Deliverable-C3.4- Laymans_report_English_Final_opt-2.pdf)

Decision-making for implementation of the Paris Agreement

THE LONG-TERM
LOW EMISSIONS STRATEGY

IMPLEMENTATION OF THE
EXISTING MEASURES FOR GHG
EMISSIONS REDUCTION

LIFE ClimatePath2050 Project

ANALYSES



ClimatePath2050:
emissions reduction
potentials, models,
projections, impacts



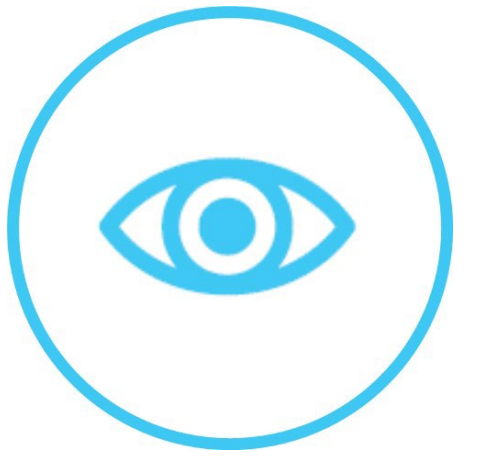
**Yearly Climate Action
Mirror and Local
Scoreboard:** monitoring
implementation

COOPERATION ON
DECISIONS

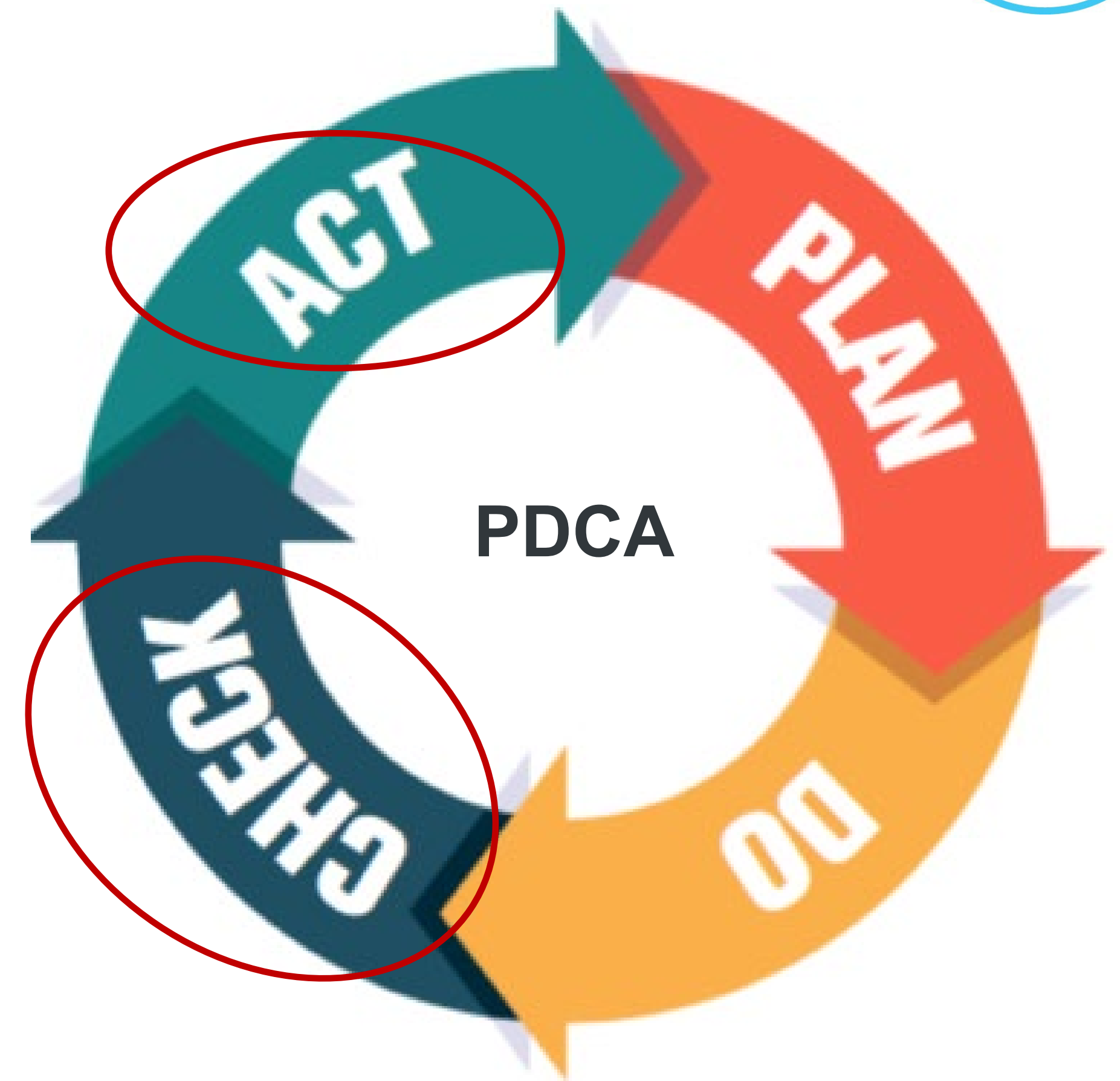
Decision support for planning
Slovenia's climate path based on
emissions projections **and** the
implementation of measures by
monitoring progress

<https://podnebnapot2050.si/?lang=en>

The Climate Action Mirror Objectives




- Main objectives of the system are to:
 - ensure **coherent, transparent, and high-quality information**
 - **improve access to the information** to be used in decision-making
 - implement a **'plan–do–check–act' (PDCA) cycle for short-term corrective actions**
 - provide specific **guidelines for mid- and long-term planning**
 - **reduce the administrative burden**
- The system was further developed to streamline **climate-related monitoring and reporting** regarding the decarbonization and energy efficiency dimensions of the Slovenian NECP in **one system**



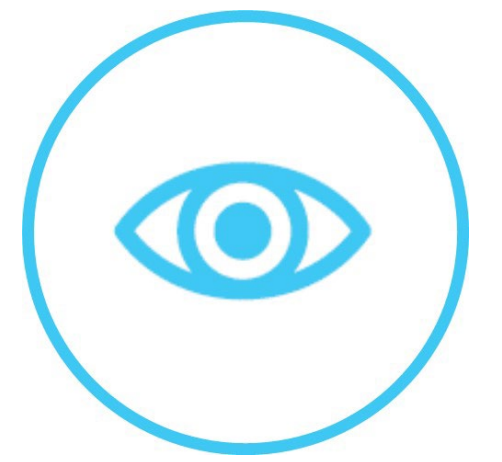
Source: <https://www.creativesafetysupply.com/glossary/pdca-cycle/>



CONTENTS	ANALYSES	RESULTS
Achievement of national targets	<ul style="list-style-type: none"> • GHG emissions in the non-ETS sector • energy efficiency • the share of renewable energy sources 	<p>Knowledge of the current state, its evaluation and recommendations for corrective actions</p>
Monitoring sectoral progress and implementation of measures	<ul style="list-style-type: none"> • achievement of sectoral targets • progress according to the results of 33 indicators • implementation of almost 100 measures in catalogue form 	
Transport Buildings Agriculture Other sectors Multisectoral measures ETS sector	 <p><i>Catalogues of measures include a general description, the legal and strategic background, implementation in the previous year, planned implementation in the current and following year, and recommendations</i></p>	
Financing	<ul style="list-style-type: none"> • by source of funding and by sector • supported investments • achieved GHG emissions reduction 	
Measures in focus	<ul style="list-style-type: none"> • a detailed analysis of three selected measures lagging behind the plans, annually 	

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The main elements



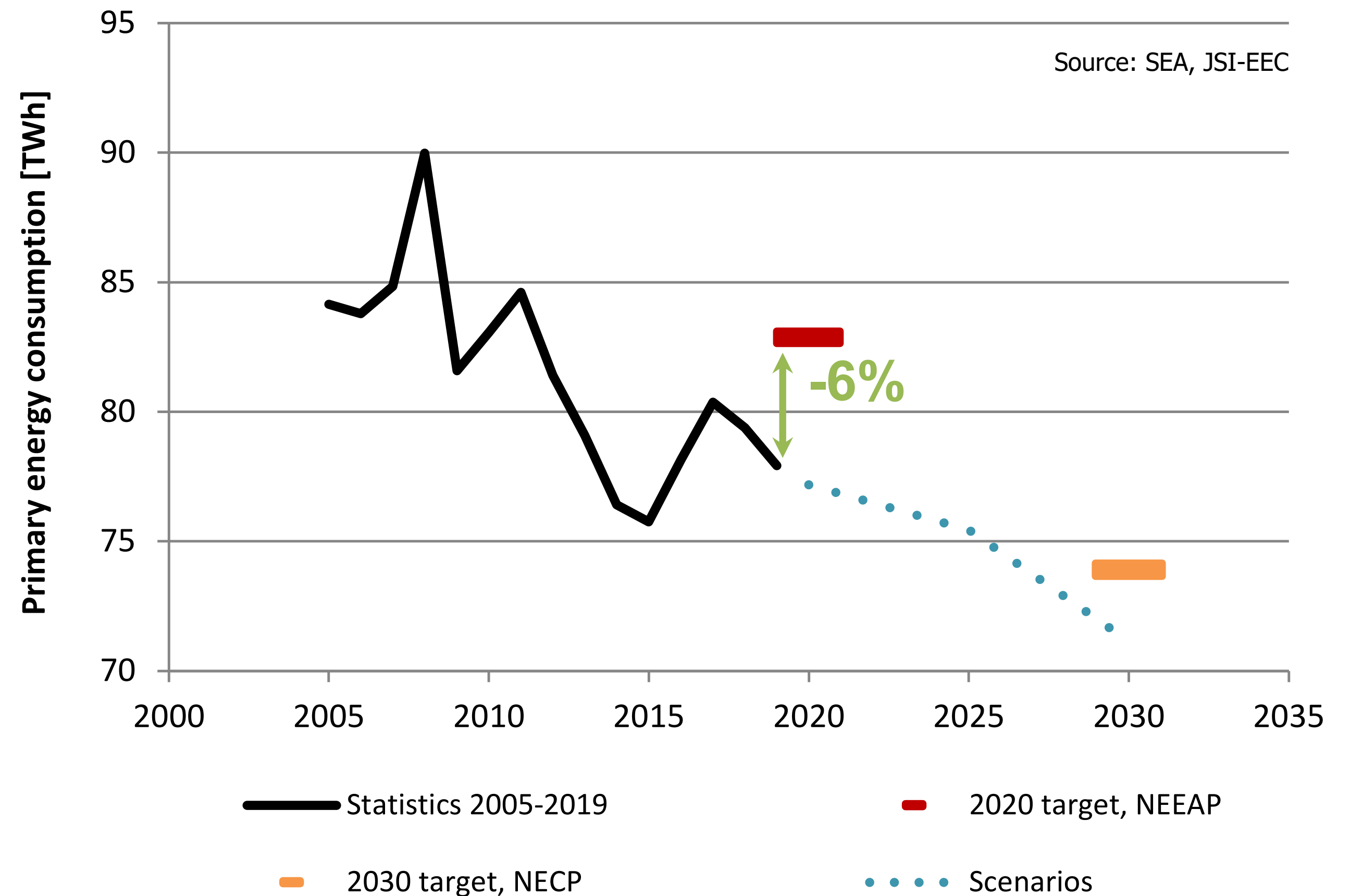
- Achievement of national targets
- Sectoral progress tracking indicators
- Catalogues of measures
- Preparation and coordination process
- Financial data
- Measures in focus

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Achievement of national targets



- Main indicators
 - Annual **GHG Emissions** According to Decision No. 406/2009/ES (based on GHG inventories data from SEA)
 - **Primary Energy Consumption** by Fuel (Final Energy Consumption by Sector) – **Article 3 of the EED** (based on data from Republic of Slovenia Statistical Office – SURS)
 - The **Share of Renewables** in Final Energy Consumption (based on data from SURS)
- Under achievement of national targets also the targets from the **Articles 5 and 7 of the EED** are included

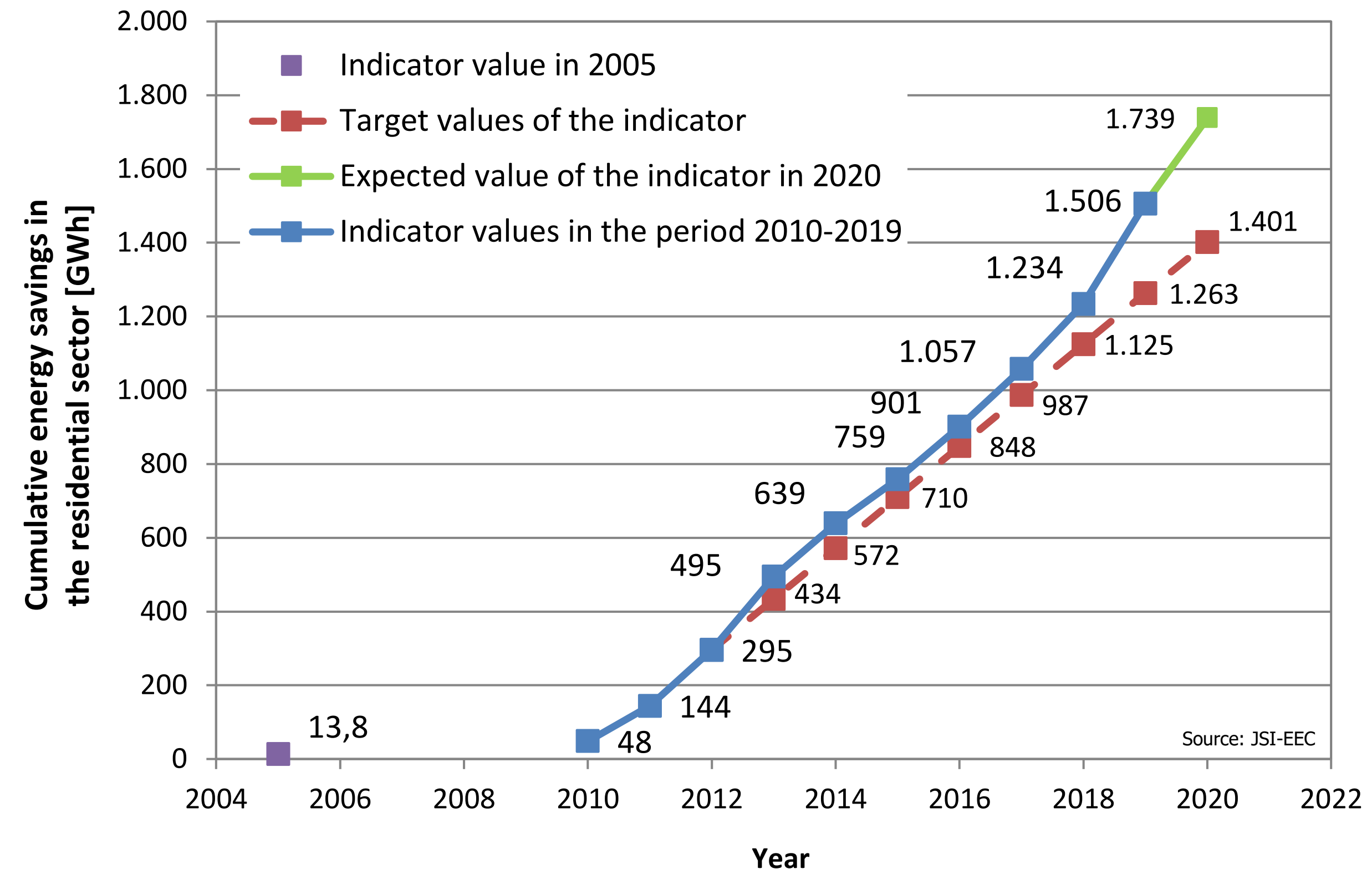


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Sectoral progress tracking indicators



- The aim of indicators is to:
 - indicate the **stronger and weaker points** of climate actions
 - support the design of **short-term corrective actions**
 - provide specific guidelines for **mid- and long-term planning**
- **29** sectoral progress tracking indicators (green growth (5), buildings (7), transport (4), agriculture (5), industry (3), waste (1), LULUCF (4) + EU-ETS (4))
- Based on **different data sources** (SEA, SURS, databases of different institutions, the Eco Fund, the Energy Agency, the Ministry of Infrastructure, the electricity distribution system operator, etc.)
- All indicators are available **online**
 - Slovene: <http://kazalci.arso.gov.si/sl/themes/climate-mirror>
 - **English:** <http://kazalci.arso.gov.si/en/themes/climate-mirror>



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An example of a summary of sectoral indicators



No.	Indicator	Unit	Year observed	State	Annual target	2020 target	Indicative annual target achievement	Impact on mid-term emissions	Assessment of the impact on mid-term emissions – Explanation
Transport									
PO02	CO ₂ emissions of new personal vehicles	gCO ₂ /km	2018	120	113	101	☹️	Yellow	In 2016 and 2017, the trend of a reduction in the specific emissions of new vehicles stopped, and in 2018 such emissions even slightly increased, so that achievement of the 2020 target is questionable.
	and of all personal vehicles	gCO ₂ /km	2018	178	160	152	☹️	Yellow	The average emissions of all vehicles decreased significantly in 2017 and then again increased in 2018. Here, too, achievement of the target is on a critical path, and the implementation of measures in this field will need to be strengthened.
PO03	Share of RES in transport	%	2018	5.5	8.3	10.0	☹️	Red	The indicator improved for the second year in a row, but still lags behind the annual target.
PO04	Passenger-kilometres in public passenger transport	Million pkm	2018	1,514	1,946	2,092	☹️	Yellow	In 2018, the total number of passenger kilometres in public passenger transport decreased, thus interrupting the multi-year growth trend. Achievement of the target is on a critical path; it will be necessary to strengthen the implementation of measures in this field. The year 2020 will not be representative; the target will not be achieved due to the changed circumstances during the coronavirus pandemic.
PO05	Sustainable freight transport (share of rail transport in total transport volume)	%	2018	25	25	26	😊	Yellow	The share of rail transport in total freight transport with at least one point in Slovenia continues to stay above the indicator projected values; however, in 2018 it fell below the 2020 indicative target.

- Indicator (no. / name / unit)
- Year observed
- State
- Annual / 2020 target
- Indicative annual target achievement / Impact on mid-term emissions
- Assessment of the impact on mid-term emissions - explanation

PRENOVA STAVB KULTURNE DEDIŠČINE IN DRUGIH POSEBNIH SKUPIN STAVB	
SPLOŠEN OPIS	
OZNAKA INSTRUMENTA	OP TGP: NS-6 AN URE: J.6 OP EKP: prednostna os 4, prednostna naložba 4.1
UČINEK V SEKTORJU	stavbe – splošno
VPLIV NA SEKTOR ETS ALI NEETS	neETS <input checked="" type="checkbox"/> ETS <input type="checkbox"/>
TGP NA KATERE VPLIVA INSTRUMENT	ogljivkov dioksid (CO ₂)
VRSTA INSTRUMENTA	sklop instrumentov
ODGOVORNOST ZA IZVAJANJE	Mzi DE
NA KATERE CILJE VPLIVA INSTRUMENT	zmanjšanje rabe energije <input checked="" type="checkbox"/> zmanjšanje emisij TGP <input checked="" type="checkbox"/> povečanje rabe OVE <input type="checkbox"/> drugo: <input type="checkbox"/>
KRATEK OPIS	V okviru ukrepa bodo pripravljena merila za prenovo stavbne kulturne dediščine in drugih posebnih skupin stavb. Predvidena je izvedba demonstracijskih projektov, razvoj in uvajanje primernih tehnologij, vzpostavitev sheme finančne podpore in zagotovitev finančnih sredstev za obdobje 2014–2020.
PRAVNE IN STRATEŠKE PODLAGE	
EU ZAKONODAJA	/
NACIONALNE PRAVNE PODLAGE	/
NACIONALNE STRATEŠKE PODLAGE	Operativni program ukrepov zmanjšanja emisij toplogrednih plinov do leta 2020 (OP TGP) Akcijski načrt za energetske učinkovitost za obdobje 2017–2020 (AN URE) Dolgoročna strategija za spodbujanje naložb energetske prenove stavb (DSEPS) Operativni program za izvajanje evropske kohezijske politike v obdobju 2014–2020 (OP EKP)
IZVAJANJE INSTRUMENTA V LETU 2018	
POTEK IZVAJANJA	Instrument se še naprej izvaja samo delno. <i>Smernice za energetske prenove stavb kulturne dediščine</i> sta Mzi in MK izdala že leta 2016, leta 2017 pa je bil potrjen pilotni projekt energetske prenove petih stavb Ministrstva za kulturo, s skupno tlorisno površino skoraj 55.500 m ² , po modelu energetskega pogodbeništvu. V letu 2018 je bil objavljen javni razpis za podelitev koncesije za izvedbo tega projekta, ki je trenutno v drugi fazi konkurenčnega dialoga. V okviru razpisov za energetske prenove stavb javnega sektorja se za stavbe kulturne dediščine upoštevajo specifična merila za ocenjevanje, in sicer se lahko v izračunu upoštevata tudi prihranki tistih ukrepov, ki jih zaradi varovanja kulturne dediščine ni mogoče izvesti v celoti ali delno. V skladu z <i>Dopolnitvijo DSEPS</i> so bila omejena merila januarja 2019 v okviru prenove. <i>Navodil za delo posredniških organov in upravičencev pri ukrepu energetske prenove stavb javnega sektorja</i> še nekoliko nadgrajena. V <i>Dopolnitvi DSEPS</i> je za stavbe kulturne dediščine predvidena tudi prilagoditev višine dodeljenih sredstev glede na zahtevnost in obseg posegov, ki zaenkrat še ni bila vzpostavljena, enako pa velja tudi za shemo finančnih podpor za projekte energetske prenove stavb kulturne dediščine. Takšna shema bi bila zaradi velikega deleža javnih stavb, ki so v celoti ali delno spomeniško zaščitene, nujna, za njeno delovanje pa bo potrebno zagotoviti ustrezne finančne spodbude.
DOSEŽENI UČINKI	Spremljanje učinkov je predvideno samo za pilotni projekt, ki pa leta 2018 še ni bil izveden.
PREDVIDENO IZVAJANJE INSTRUMENTA V OBDOBJU 2019–2020	
PREDVIDENO IZVAJANJE	Predvideno je izvajanje pilotnega projekta.
PREDVIDENI UČINKI	V okviru pilotnega projekta je predvideno: • zmanjšanje rabe energije: 3,5 GWh/leto • povečanje proizvodnje energije iz OVE: 81 MWh/leto • zmanjšanje emisije CO ₂ : 0,7 kt/leto
PRIPOROČILA ZA ODLOČANJE	
Za večji obseg energetske prenove stavb kulturne dediščine in drugih posebnih skupin stavb je nujno, da Mzi DE čim hitreje vzpostavi izvajanje ukrepa v celotnem obsegu iz <i>Dopolnitve DSEPS</i> in zagotovi sofinanciranje, prilagojeno tem ciljnim skupinam (npr. tudi v ločenih razpisih oz. pozivih).	
VRNI PODATKOV	
• Mzi DE, Projektna pisarna za energetske prenove • Mzi, Portal energetika, Projektna pisarna za energetske prenove (http://www.energetika-portal.si/podrocja/energetika/energetska-orenova-javnih-stavb/projektna-pisarna/)	
DATUM PRIPRAVE	
22. marec 2019	

The Climate Action Mirror Catalogues of measures



- Overviews of the implementation of measures
 - **Qualitative and quantitative information** (funds, GHG, EE, RES impacts...)
 - Qualitative information is crucial for measures that cannot be directly assigned the quantitative impacts → their failure can hinder the implementation of other measures or achievement of targets
- Inspired by the Austrian reports on GHG projections and the assessment of policies and measures under MMR
- Almost **100 climate mitigation measures** (transport, buildings, agriculture, non-ETS industry, the non-ETS energy sector, waste management, multisectoral measures, and LULUCF + EU-ETS) implemented by **14 different ministries and institutions**
- Preparation of **recommendations for decision-makers**
 - derived from the analysis of sectoral indicators, overviews of the implementation of measures and financial analysis
 - supporting the design of short-term corrective actions (**PDCA cycle**)
 - in 2019 and 2020 together **145 recommendations**;
 - a number of recommendations has been **included in NECP**

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Preparation and coordination process

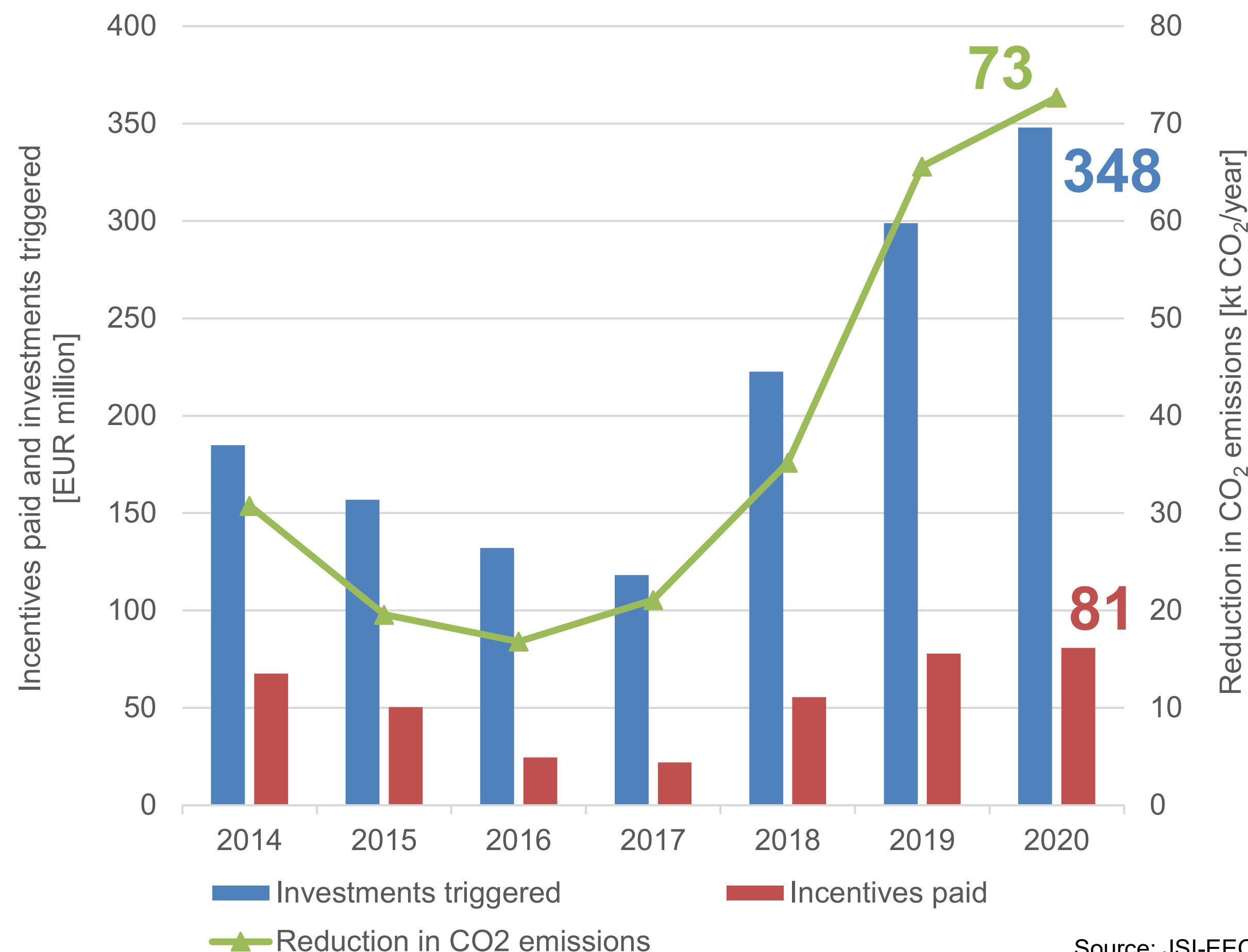
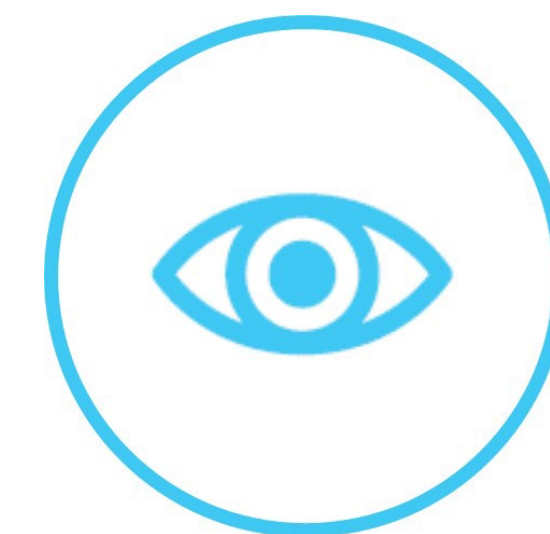


The involvement of stakeholders is essential for the better design of measures for GHG emissions reduction and their better implementation in the transition to climate neutrality!

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Financial data

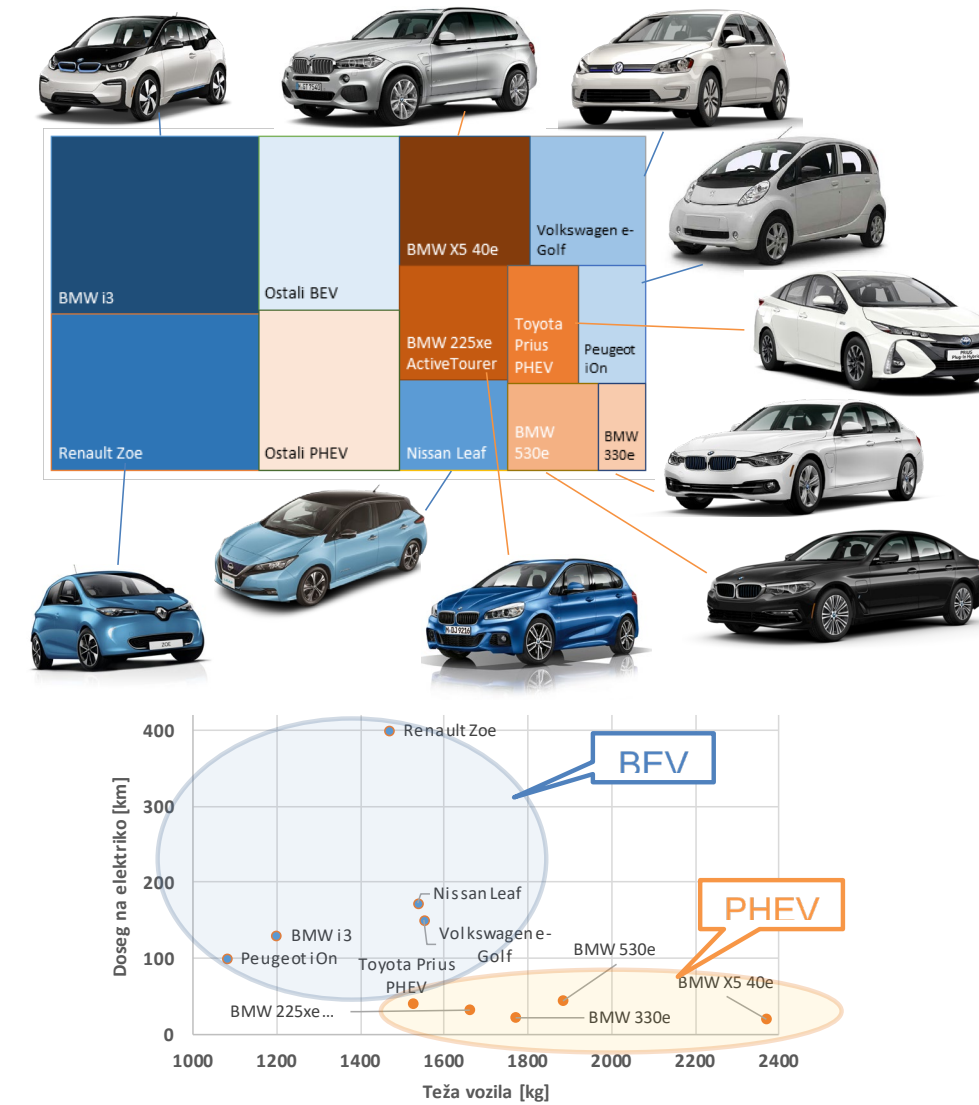
- **Overview of funds** used to finance climate mitigation measures, including the impact on GHG emissions reduction
- 3 major sources of incentives
 - **Energy efficiency contribution** in the price of energy / managed by Eco Fund
 - **Climate Change Fund** / managed by MESP
 - **Cohesion Fund**
- Importance of **constantly available** incentives and **evenly distributed** investments
- 2020 – efficiency of incentives: **EUR 1,000 per t of CO₂ emissions reduction**
- Further development is needed



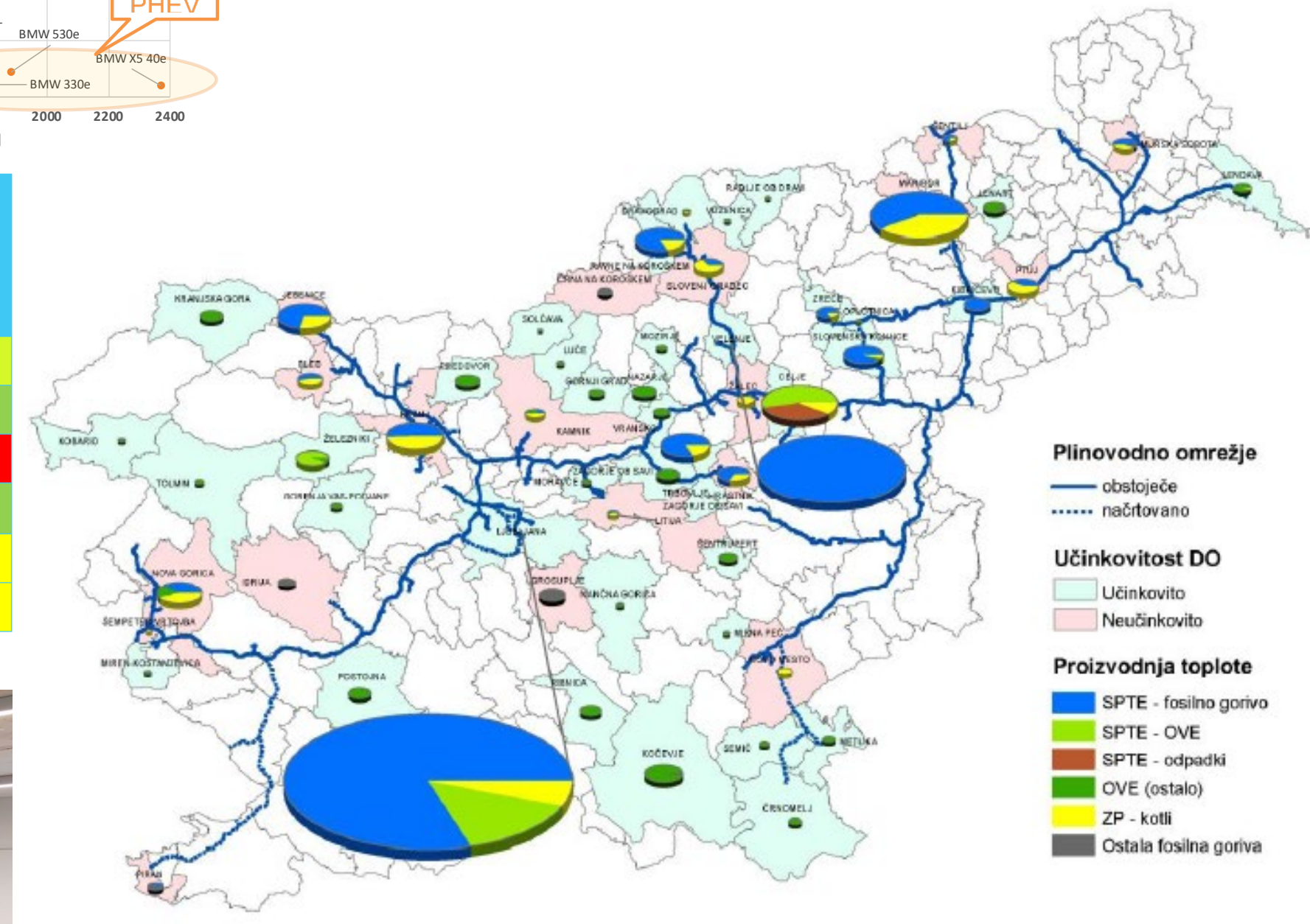
Source: JSI-EEC

The Climate Action Mirror Measures in focus

- Detailed analysis of selected measures due to their under-achievement in terms of expected effects and implementation dynamics
- 3 measures in each annual cycle, 9 measures altogether
- Significant response from the general public and the press (energy poverty, electric mobility, supporting companies in the transition to a low-carbon society, green fiscal reform, the energy renovation of central government buildings)



Element vrednotenja	Projekt ZERO	Nepovratne finančne spodbude socialno šibkim občanom za zamenjavo starih kurilnih naprav na trdna goriva	Nepovratne finančne spodbude socialno šibkim etažnim lastnikom za naložbe v večjo energijsko učinkovitost starejših večstanovanjskih stavb
Relevantnost	VISOKA	SREDNJA	SREDNJA/VISOKA
Učinek	SREDNJI	NIZEK	VISOK
Efektivnost	NIZKA	NIZKA	NIZEK
Dolgoročnost učinka	NIZKA/NI PODATKA	VISOKA	VISOKA
Prilagodljivost	SREDNJA	SREDNJA	SREDNJA
Predvidljivost	NIZKA	SREDNJA	SREDNJA



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Conclusions

- Prepared in **close consultation with stakeholders** and including **a wide network of experts**
- **Recommendations** for the design of short-term corrective actions, thus implementing a **PDCA ('plan-do-check-act') cycle**, for which the **active participation of stakeholders is essential**
- Encouraging policymakers to use available analyses and results more **to track the progress of the implementation of climate actions** → use of results for climate governance has increased (monitoring, reporting, development of new instruments, improvement of existing measures, preparation of strategic documents...)
- Already began „after LIFE“: **The Climate Action Mirror 2021 and 2022** (MESP)
- Good basis for climate-related monitoring and reporting under the **decarbonization and energy efficiency dimensions** of the Slovenian NECP

Main future challenge

How to develop the NECP reporting and monitoring in a way to further stimulate the use of results as the basis for future decisions?



Thank you for your attention!

Barbara Petelin Visočnik
barbara.visocnik@ijs.si