

# I4CE

INSTITUTE FOR  
CLIMATE  
ECONOMICS

Une initiative de la Caisse des Dépôts et  
de l'Agence Française de Développement

## Landscapes of Domestic Climate Investment & Finance

*Experience from five years of tracking in France*

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### Projects supported by:



**ADEME**



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# I4CE – Institute for Climate Economics

A think tank

providing public and private decision-makers with expertise on economic and financial issues related to the energy and ecological transition

Agriculture, Forest and Climate  
Industry, Energy and Climate  
Cities, Infrastructure and Climate  
Finance, Investment and Climate



I4CE is an initiative of Caisse des Dépôts and Agence Française de Développement and is also supported by Morocco's Caisse de Dépôts et Gestion.

What is a landscape of domestic climate investment and finance?

# Tracking investment and financial flows in domestic low-emission tangible assets

## 4-step methodology

1. Measure CAPEX in low-emission projects
2. Identify the project managers involved
3. Understand which financial tools they used
4. Map public and private channels supporting these tools from capital source

## 5 key low-carbon domains



# Digging Deeper than Totals

**Climate investment in  
2017**

**41.2**

billion euros

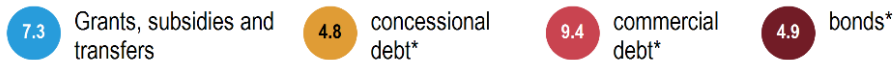
# Households and private companies are the principal project developers, followed by public entities

## Landscape of climate finance in 2017

### Sources and intermediaries

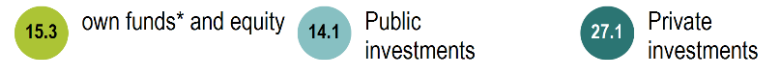


### Financing instruments



\* including balance-sheet financing in companies

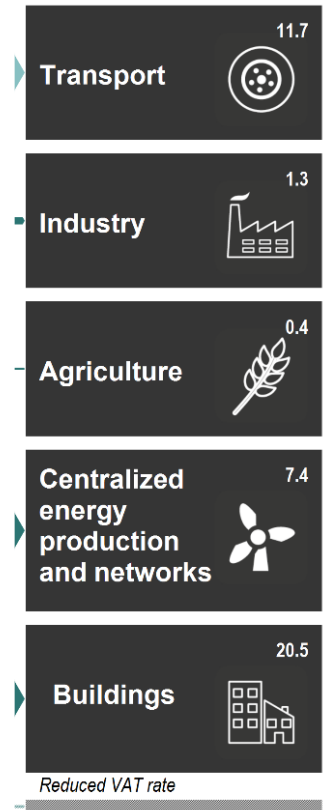
### Investments



in billion current euros

I4CE - Institut for Climate Economics

### Sectors



# From reporting to decision-making why keep track of domestic climate finance?

- Reporting to decision-makers on the status of climate-related investment and financial flows in a coherent manner;
- Measure the gap between current financial flows and investment needs to achieve climate objectives
- Identify policy factors behind investment successes and setbacks, recommend solutions to reduce the investment gap
- Provide national strategies with a tool to plan how to raise and reorient public and private flows towards climate investment

From I4CE and EEA policy brief [\*Landscapes of domestic climate finance in Europe : supporting and improving climate and energy policies for a low-carbon, resilient economy\*](#) (2016)

# The results of the Landscape correspond to the “new needs” of French decision makers

France’s energy transition act mandates tracking and mapping climate finance flows

The government is to present an annual report to the Parliament which “**quantifies and analyses public finance, assesses private finance, and measures their adequacy with the financial requirements** to achieve the objective and transition pace of the law”.

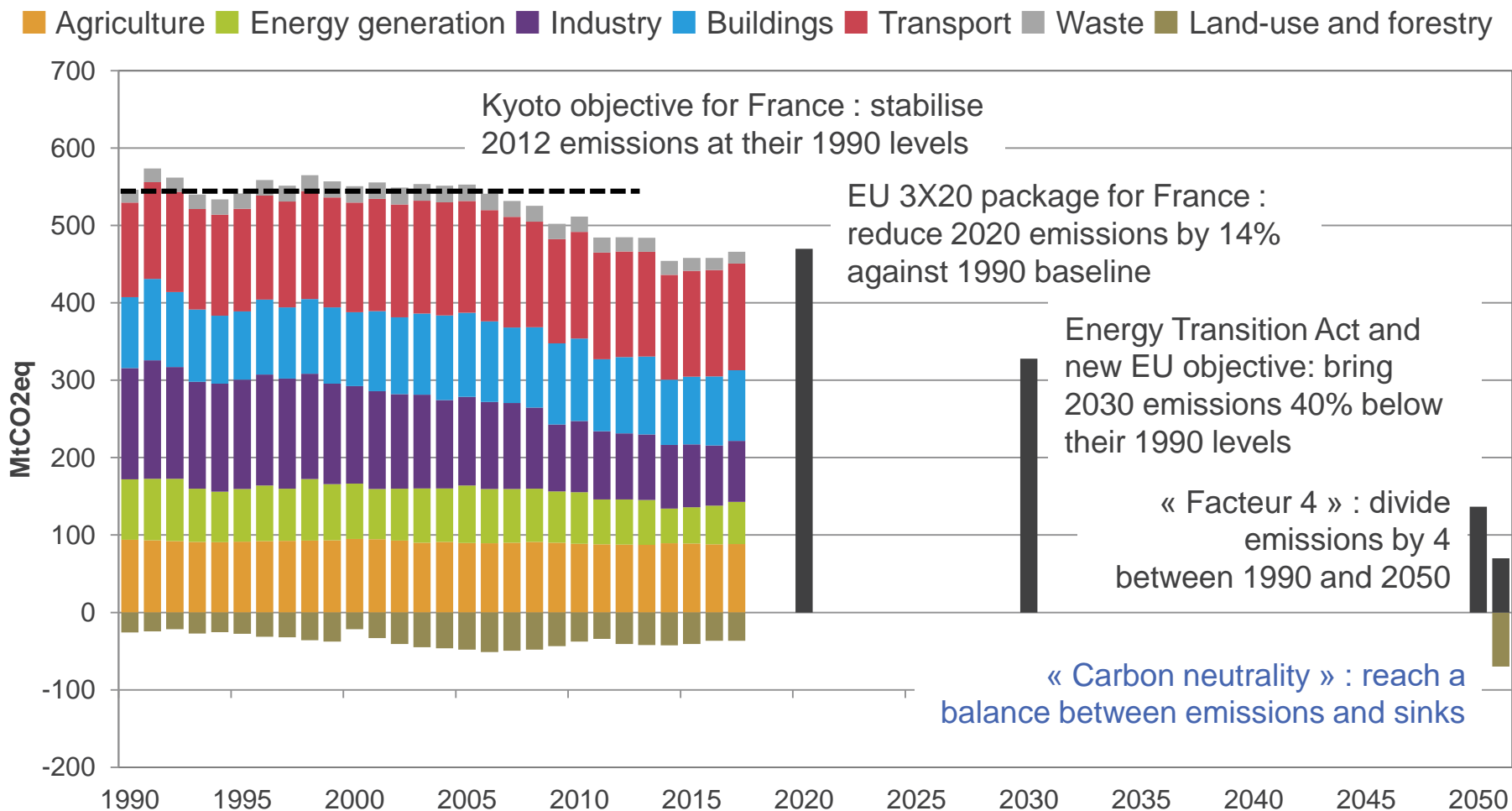
Art. 174 of the Energy transition for green growth act (LTECV, 2015)

- Energy Transition Act: Article 174
- Contributions to Finance Bills (PLF): DPT Climate and Energy transition draft budget
- Reports for French Strategy on green finance: defining the “business plan” for the energy transition
- Economic, Social and Environmental Council: opinion on the energy transition of February 2018
- CGDD and Eurostat: national climate change mitigation expenditure account
- French National Energy and Climate Plan (SNBC)



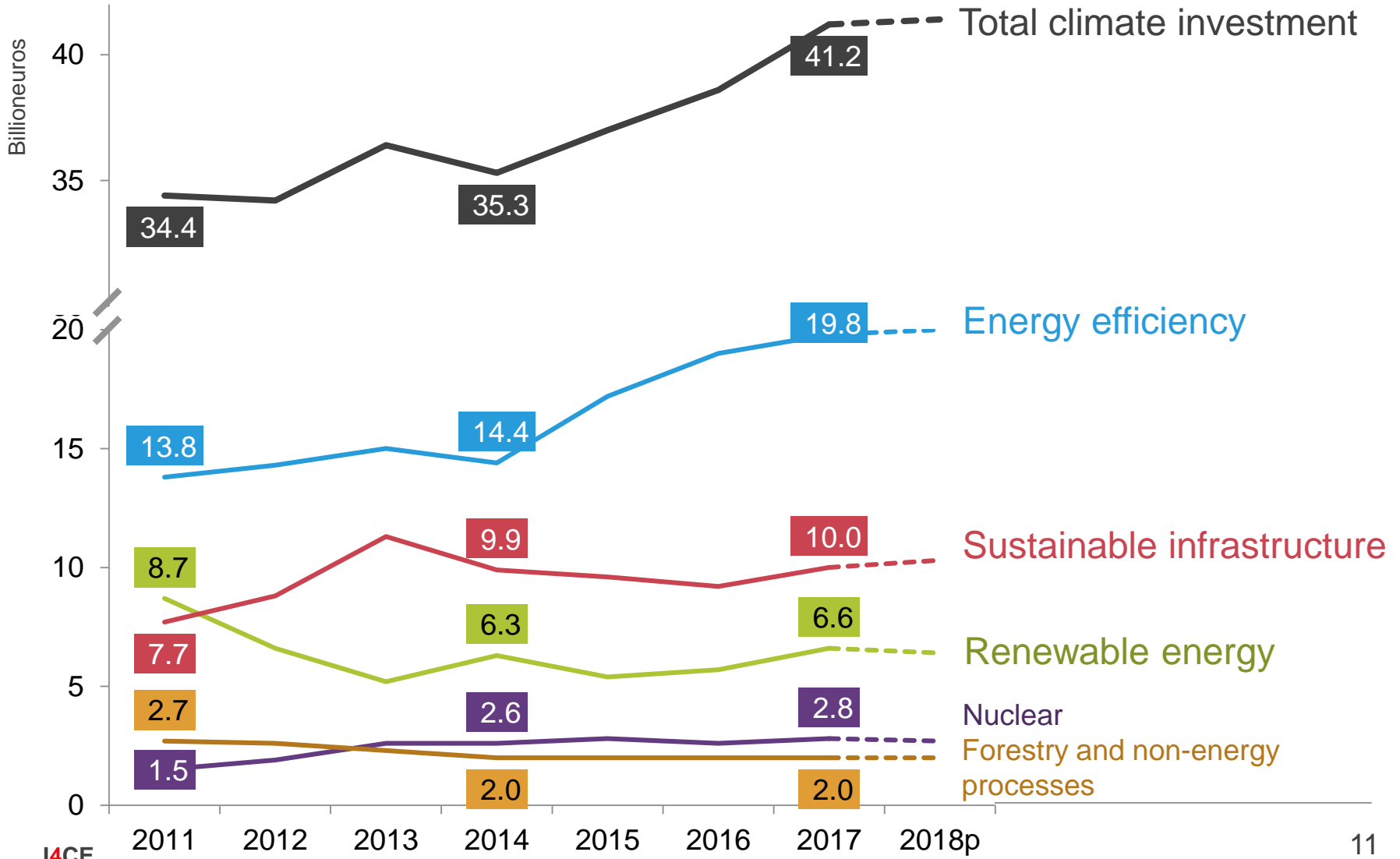
# France climate neutrality by 2050 goal means zero emissions from fossil fuel

Evolution of GHG emissions in France from 1990 to 2017 and national climate objectives (based on CITEPA inventory)

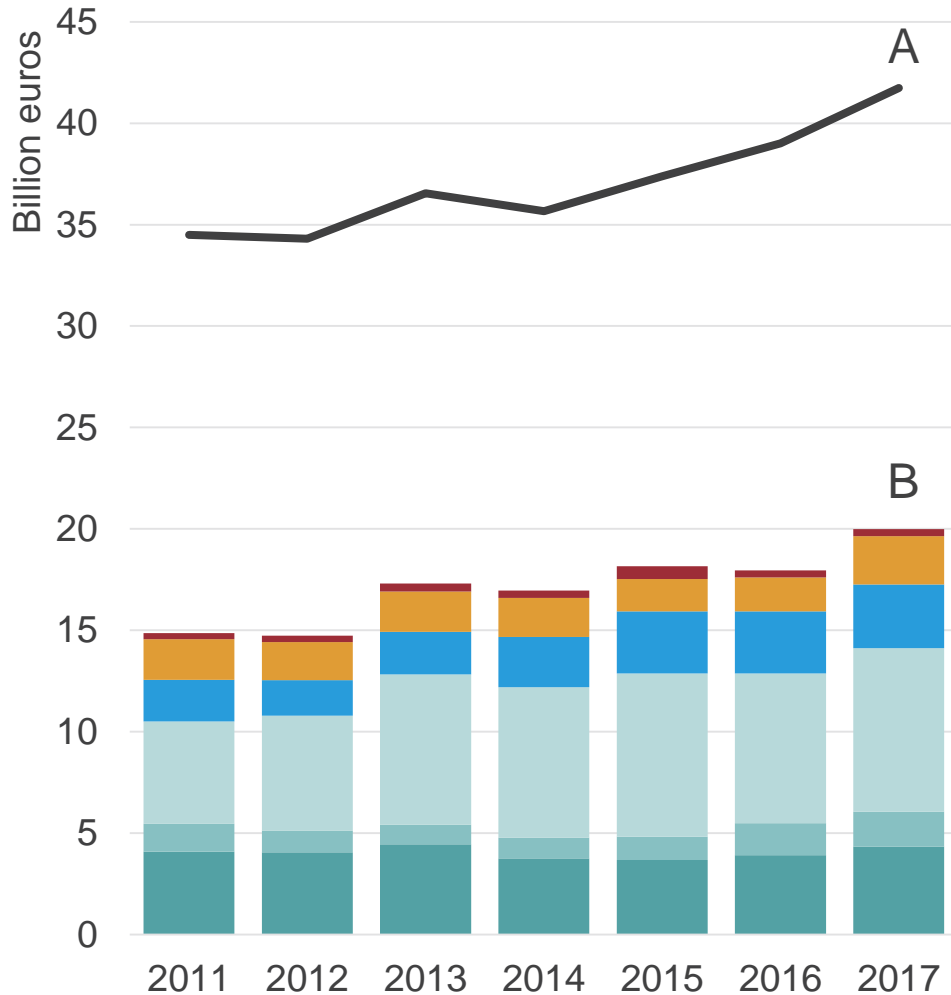


What data and insights can it provide for sectoral policy making and planning?

**41 billion euros invested in 2017,  
 increasing by 17% since 2014**



# Public authorities are increasingly intervening to fund low-carbon investments



A. Total climate investments

B. Public authorities' intervention

**1. Investment of public project developers**

- Infrastructure management co.
- Social housing companies
- Central and local government

**2. Public cofinance for households and private companies**

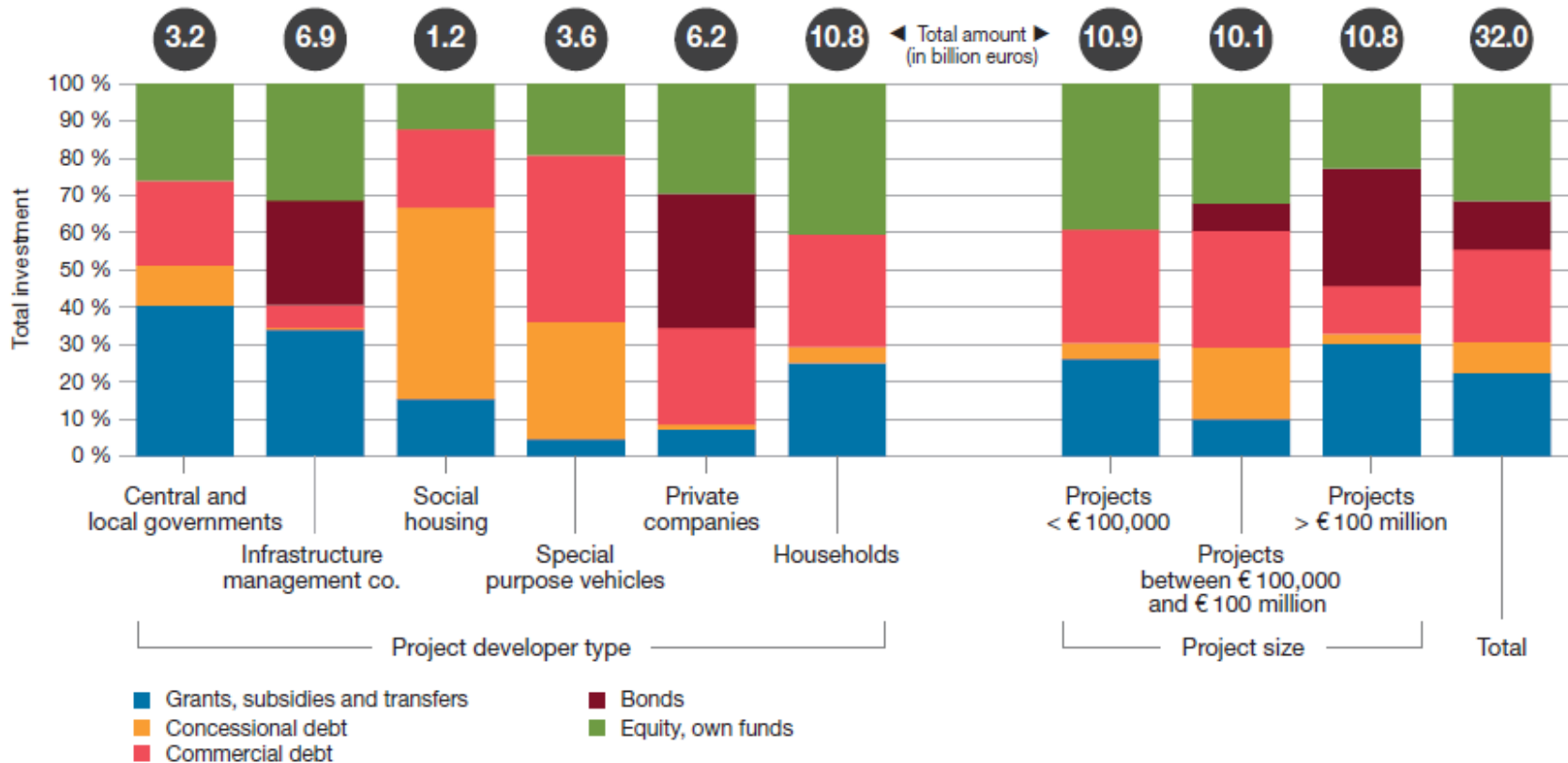
- Subsidies and grants
- Concessional debt

**3. Redirection of private resources**

- Other instruments, such as white certificates

# Funding instruments vary depending on project developer and project size (2016 data)

LOW-CARBON INVESTMENT FUNDING INSTRUMENTS BY PROJECT DEVELOPER AND PROJECT SIZE, 2016



# Assessing investment levels across different types of renovation



Climate investments in 2017

**14,3**   
 Billion euros

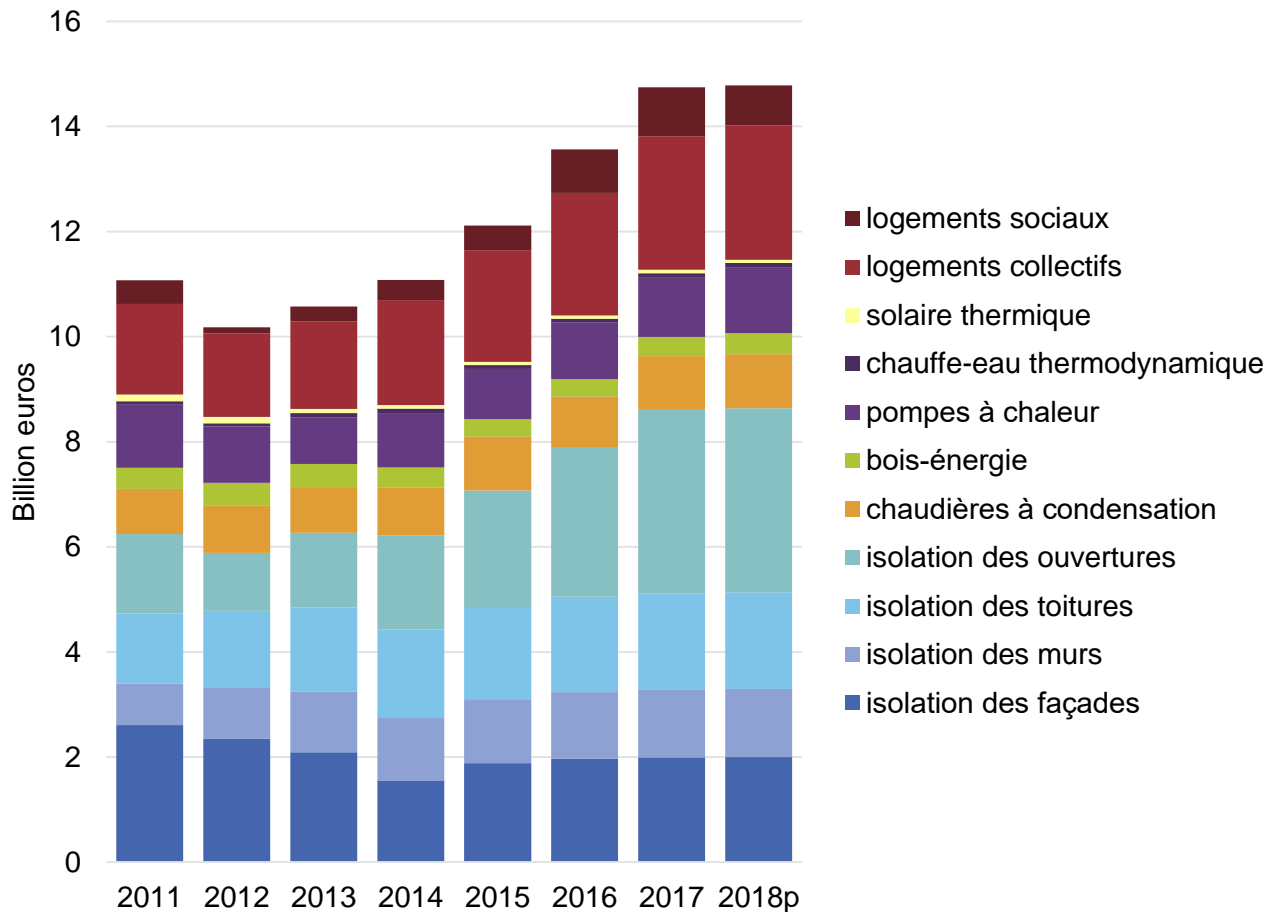
Gap compared to 2016-2020 investment needs

**+ 5 to 8**  
 Billion euros

Publically driven finance

**4,2**   
 Billion euros

Investments in housing renovation, by segment and type of action (private individual dwellings only)



# The amounts contributed by the main public instruments have been stable since 2015



Climate investments in 2017

**14,3** ↗

Billion euros

Gap compared to 2016-2020 investment needs

**+ 5 to 8**

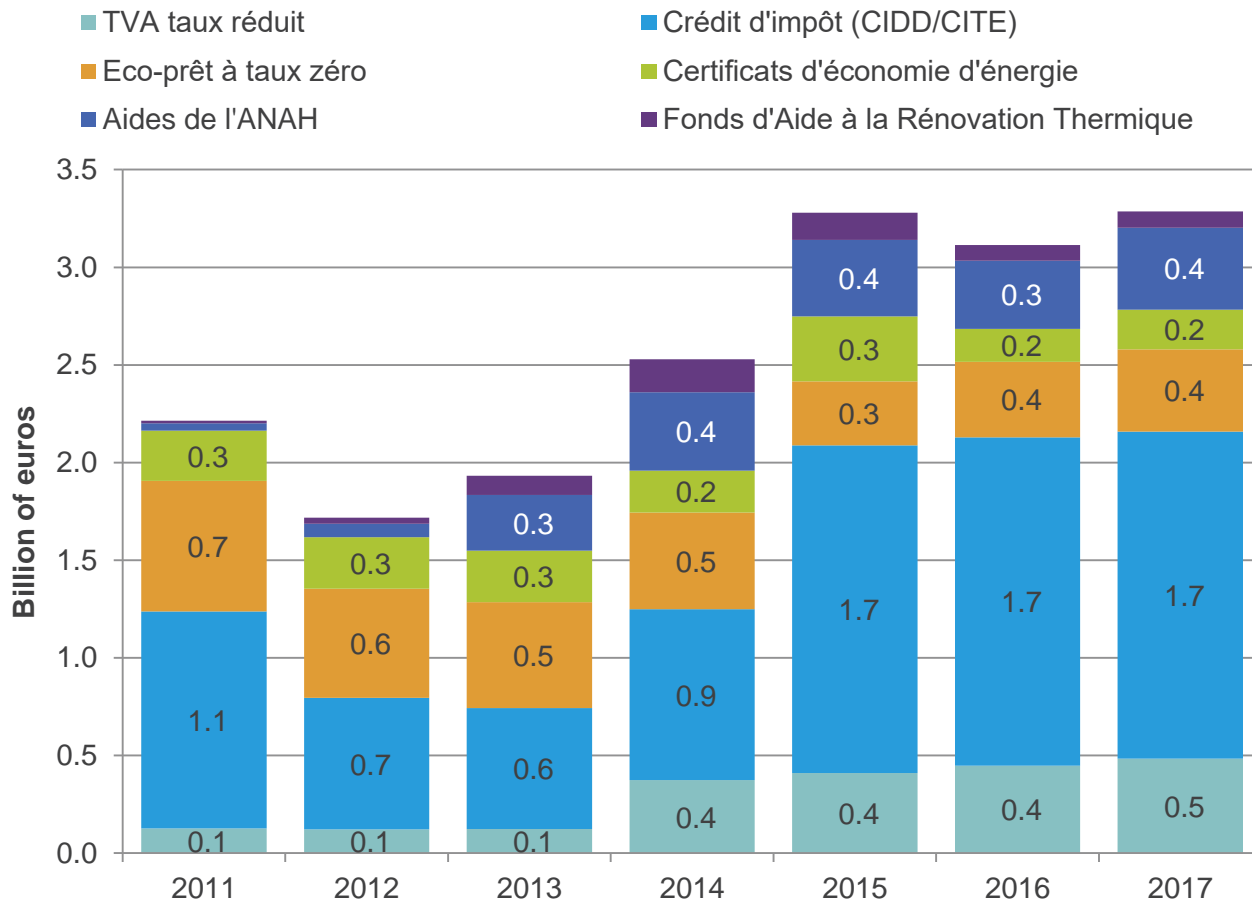
Billion euros

Publically driven finance

**4,2** →

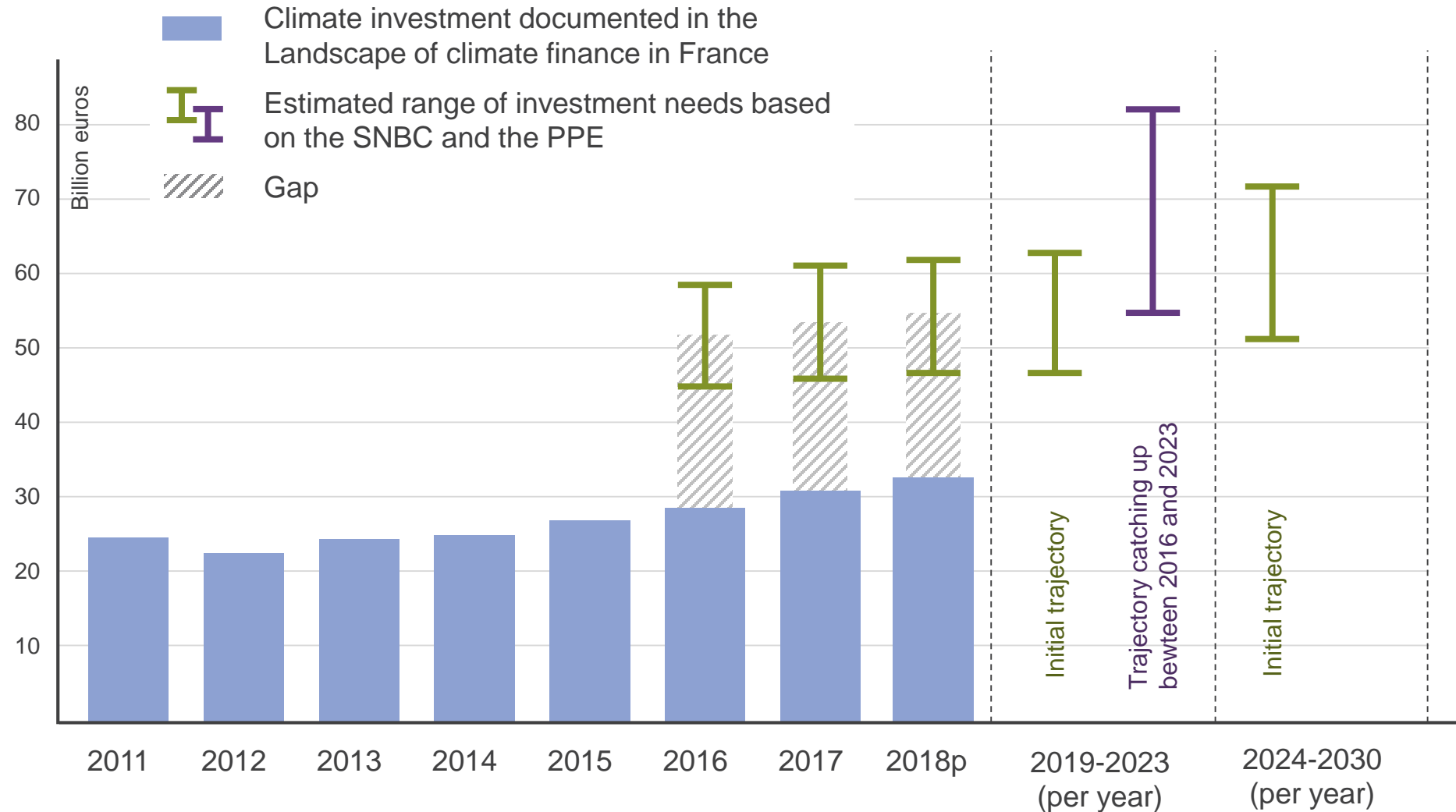
Billion euros

Public support for financing the renovation of private dwellings



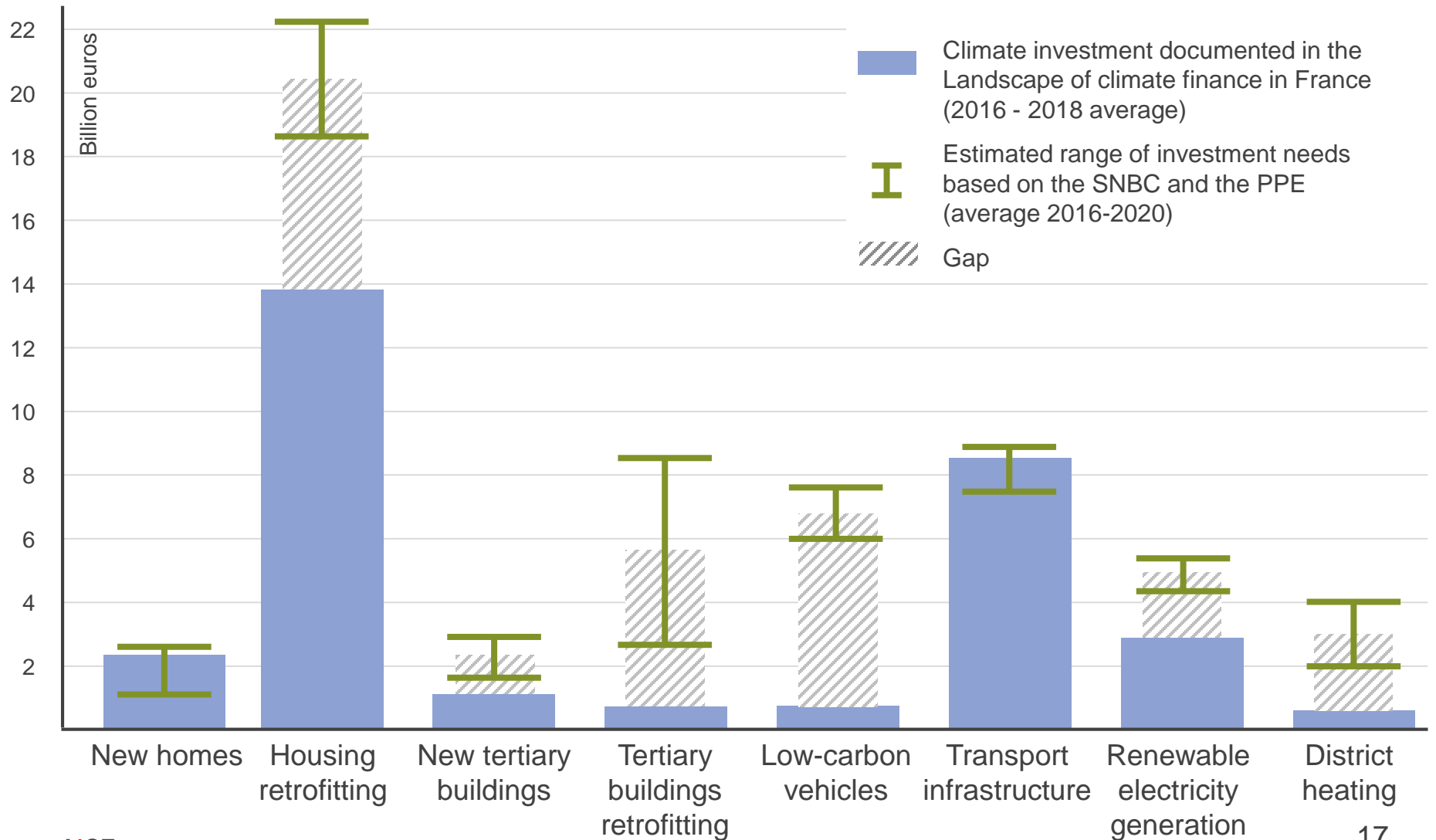
## Landscape of climate finance

**A gap of 10 to 30 billion euros per year compared to estimated needs to achieve national climate goals**















# Investment gaps vary across sectors

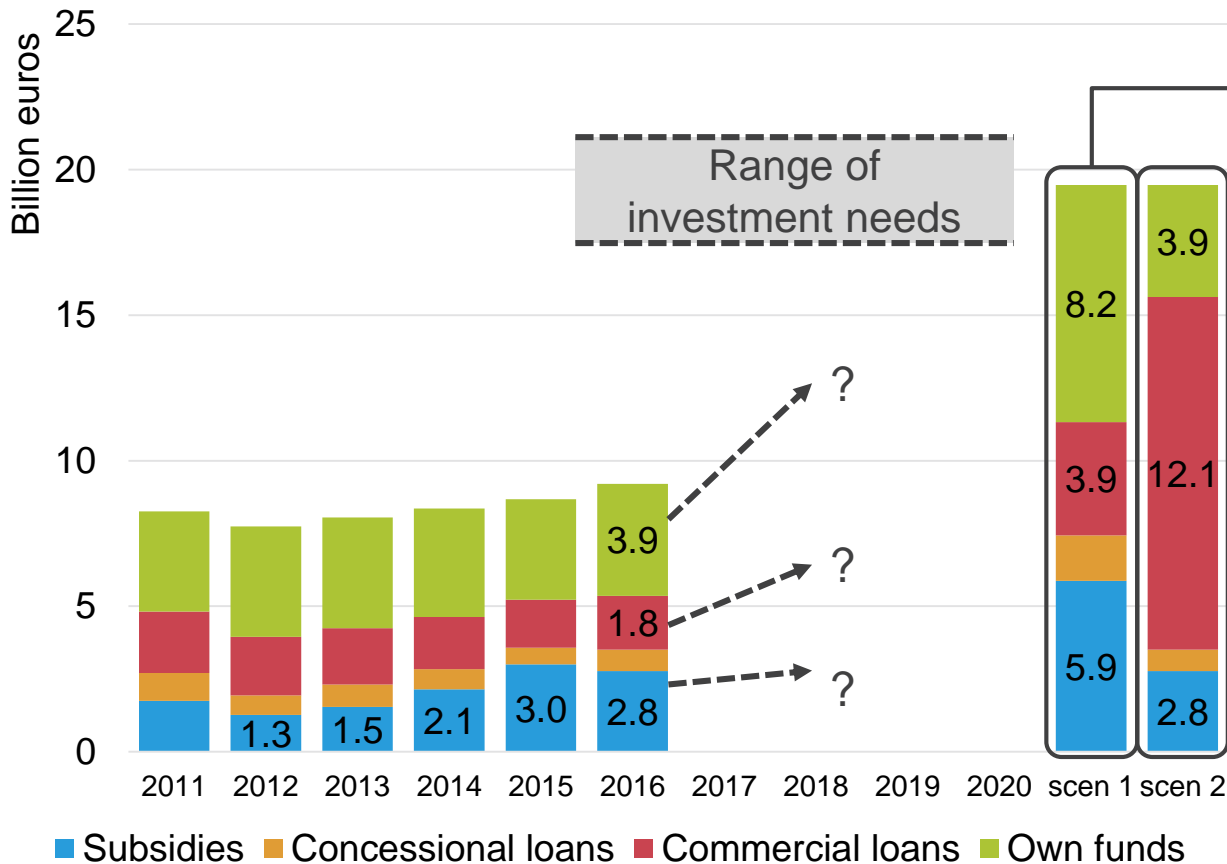


# Investment gaps vary across sectors

	Renewable electricity	Low carbon vehicles	Transport infrastructure	Housing retrofitting	District heating
Climate investment in 2017	4  billion €	1.4  billion €	9.6  billion €	14.3  billion €	0.3  billion €
Gap with 2016-2020 investment needs	+1 - 2 billion €	+5 - 6 billion €	+0.3 billion €	+5 - 8 billion €	+2 - 4 billion €
Publicly-driven finance in 2017	1.8  billion €	0.4  billion €	9.5  billion €	4.2  billion €	0.3  billion €

# An illustrative funding plan for the private residential sector

Current climate investment and climate investment needs in private dwellings in France



**Scenario 1**

- Constant leverage
- No significant change in project profitability or cost
- Investment objectives achieved through increase public funding with matching private cofunding

**Scenario 2**

- Increased leverage
- Constant public funds
- Increase in project profitability and reduced costs and risks
- Involvement of third party private finance (e.g. loans)

# Further documents and readings

<h2>France 2018 Results Executive Summary</h2>	<h2>Full report Five years of application in France</h2>	<h2>Article on Methodology in International Economics</h2>	<h2>Annex comparing low-carbon asset taxonomies</h2>											
 <p><b>Landscape of Climate Finance in France</b>          2017 Edition - Executive Summary          Authors: Hélène Hénaud   Joël Guéhenne   Ian Cochran          I4CE - Finance, Investment and Climate Research Program</p> <p>December 2017</p> <p>Between 2013 and 2016, up to €32bn of investment contributed each year to climate mitigation in France.</p> <p>In 2016, the investments are divided between 14.3 billion euros for energy efficiency, 9.9 billion euros for the development of renewable energies and 0.2 billion euros for construction and upgrading of sustainable transport and network infrastructure. Investments in the development and renovation of the country's nuclear capacity, in non-energy investment and the reduction of emissions of other GHGs than CO<sub>2</sub>, are estimated at 2.1 billion euros.</p> <p><b>THE ENERGY MIX</b></p> <p>The Landscape of Climate Finance is a comprehensive study on the financial flows in favour of climate and the broader energy transition in France.<sup>1</sup> The study maps the three supporting investments, leading to greenhouse gas mitigation across the French economy.</p> <p>Flows are compared from year to year and assessed in comparison to pledged investment needs to address national GHG reduction targets and other climate objectives.</p> <p>The principal objective of the study is to support public debate on the role and evolution of public capital in France. It is a response of climate-related investments.</p> <p>The Landscape of Climate Finance is based on the integration of a large number of public available sources. All sources reflect multiple methodological choices made by the authors, and should thus be considered as reflections of the state of knowledge on climate-related investments in France. The study is updated annually and revised according to the availability of new sources and evolutions in the methodology.</p> <p>© 2017 I4CE. All rights reserved. I4CE is a non-profit organization. I4CE is a member of the Institut Français de Recherche en Économie Industrielle (IFRI).</p>	 <p><b>Landscape of domestic climate finance</b>          Lessons from five years of application in France</p> <p>September 2018</p> <p>Hélène Hénaud   Ian Cochran   Joël Guéhenne   Jean Deschamps   Ana Bittel</p> <p>© 2018 I4CE. All rights reserved. I4CE is a non-profit organization. I4CE is a member of the Institut Français de Recherche en Économie Industrielle (IFRI).</p>	 <p>Check Access Export</p> <p>International Economics      Volume 155, October 2018, Pages 69-83</p> <p><b>ELSEVIER</b></p> <p>The Landscape of domestic climate investment and finance flows: Methodological lessons from five years of application in France</p> <p>Hélène Hénaud, J. B. Ian Cochran</p> <p>Show more</p> <p>https://doi.org/10.1016/j.inteco.2018.06.002</p> <p>Get rights and content</p> <p>Abstract</p> <p>The transition to a low-carbon and climate-resilient economy requires an unprecedented redirection and scaling up of investment and finance to adapt economic and societal systems. In comparison with these investment needs, the tracking of current domestic investment levels has been patchy in both developed and developing countries. This article details the methodology developed by I4CE - Institute for Climate Economics and its results in measuring domestic climate investment and finance flows in a coherent, sound and replicable fashion into a single 'Landscape'. Applied for the last five years in France, the results allow the assessment of the share of climate investment in domestic gross fixed capital formation. It also tracks financial instruments used by project developers to cover their capital expenditures. The 2017 French Landscape identified climate investment reaching €32bn in 2016, with variations in sources of capital and uses of financial instruments across sectors and types of project developers. These results support decision-makers in France and allow comparative assessments when contrasted with similar studies conducted in other E.U. countries.</p> <p>Previous article in issue Next article in issue</p>	<table border="1"> <thead> <tr> <th>Item</th> <th>Landscape 2017 Edition (inclusion criteria)</th> <th>SNBC National low-carbon strategy (in French)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Solar</td> <td>Projects that generate electricity from photovoltaic processes are considered in the Landscape.</td> <td>p.87 L'argumentation des bénéfices climatiques en faveur de l'anne photovoltaïque n'est pas développée dans la SNBC, qui cite « en raison de la structuration des émissions liées à la production d'électricité est historiquement carbonée ».</td> </tr> <tr> <td>We were able to track annual installations by power category as reported by the ADEME. 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Thank you for your attention!

Questions and comments  
welcome!

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