

- US Clean Energy and Sustainability Accelerator
- Impact Assessment

# The Jobs and Emissions Reduction and Abatement Potential for a \$100 billion CESA

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Prepared for Coalition for Green Capital

20 November 2020

## Key Messages

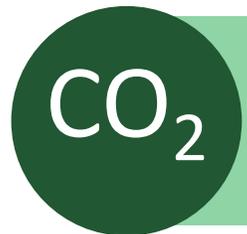
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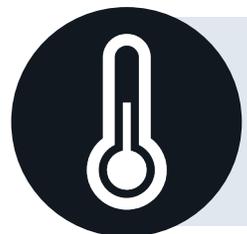
With \$100 billion in federal capitalization, the Clean Energy and Sustainability Accelerator (CESA) is expected to support \$880 billion in green investment over 10 years



CESA-supported investment is expected to deliver 440 thousand jobs in its first year, and over five and a half million jobs within its first five years



The \$100 billion capitalization of CESA would support 2.5 billion metric tons of cumulative emissions reductions over its first 10 years of operation

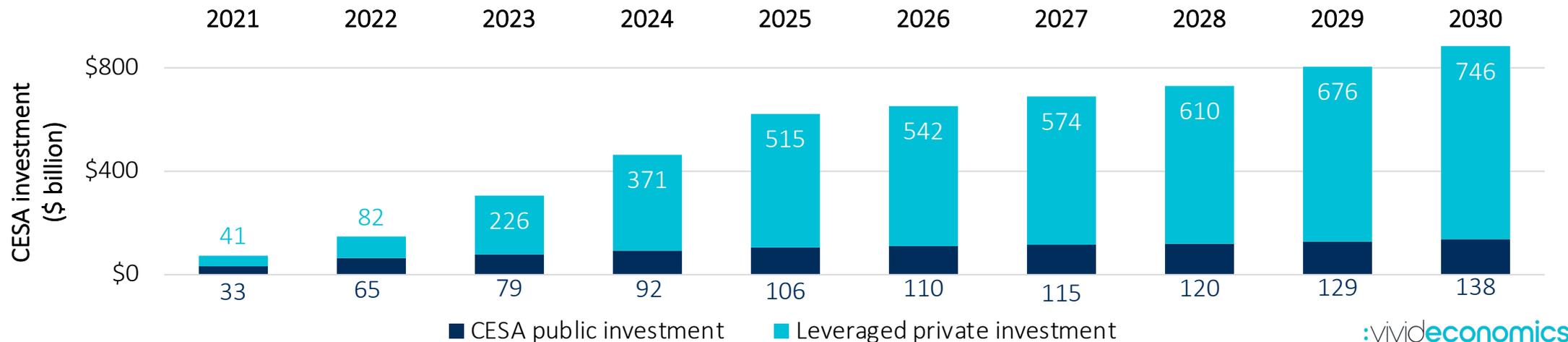


By 2030 the CESA is expected to deliver one fifth of the emissions reductions needed on a path towards net-zero emissions by 2050

## With \$100 billion in federal capitalization, the CESA is expected to support \$880 billion in green investment over 10 years

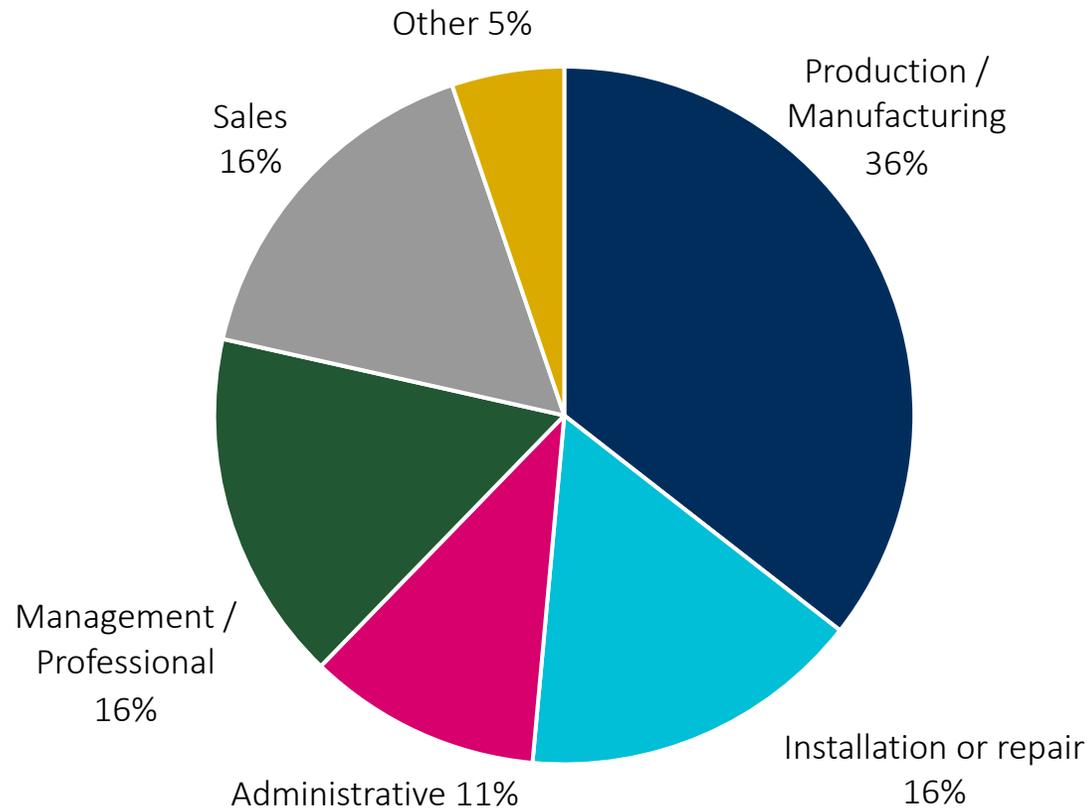
- The CESA is expected to support \$880 billion in green investment over 10 years

- ◇ The assessment models an initial federal capitalization of \$100 billion, of which \$30 billion is used for grant funding, \$35 billion is used for low-cost loans over the first two years, and \$35 billion is used as reserves for bond issuances beginning in year three
- ◇ In the third year of operation, the assessment models the deployment of a fully-fledged climate bank model, which includes balance sheet leverage on bond markets and expanded use of investment approaches, including commercial loans, equity investment and guarantees
- ◇ Over 10 years this capitalization is expected to support \$140 billion in direct investment from the CESA, supported by \$750 billion in leveraged investment through bond market borrowing and project-level private co-investment



## CESA-supported investment is expected to deliver 440 thousand jobs in its first year, and over five and a half million jobs within its first five years

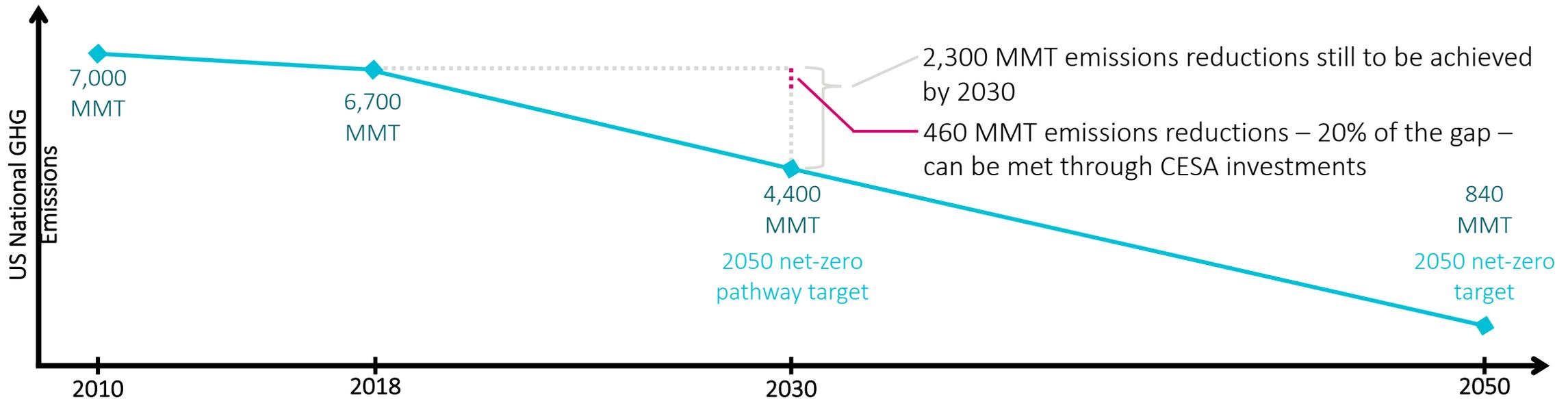
- CESA-supported investment is expected to deliver almost 440 thousand jobs in its first year, ramping up to over five and a half million jobs within its first five years
  - ◇ Jobs are measured as 'job years' for comparison across different investment cases and policy options, where 1 job year equates to a job for 1 person for 1 year



- Three fifths of jobs are created directly by investment activity – including construction, manufacturing, installation and ongoing operations – while two fifths of jobs are created indirectly in supply chains
- Almost two fifths of jobs created by CESA investments are expected in production and manufacturing jobs, with a further sixth of all jobs in installation or repair
- CESA investments and the economic stimulus they create will also support a wide range of associated white collar sales, administrative, management jobs across the US

## By 2030 the CESA is expected to deliver one fifth of the emissions reductions needed on a path towards net-zero emissions by 2050

- The \$100 billion capitalization of CESA would support 2.5 billion metric tons of cumulative emissions reductions over its first 10 years of operation
- By 2030 CESA investments would deliver 20% of reductions needed on a path towards 2050 net-zero emissions
  - ◇ Investments would support 1 million metric tons in annual emissions reductions in its first year, rising to almost 460 million metric tons by 2030 – or 7% of US 2019 national emissions (6.7 billion metric tons)
  - ◇ The Climate Crisis Action Plan identifies that to achieve net-zero emissions by 2050, US national emissions need to reach 37% below 2010 emissions by 2030, equating to a 2.3 billion metric ton reduction below 2018 emissions – with CESA emissions reductions in 2030 delivering 20% of these required reductions



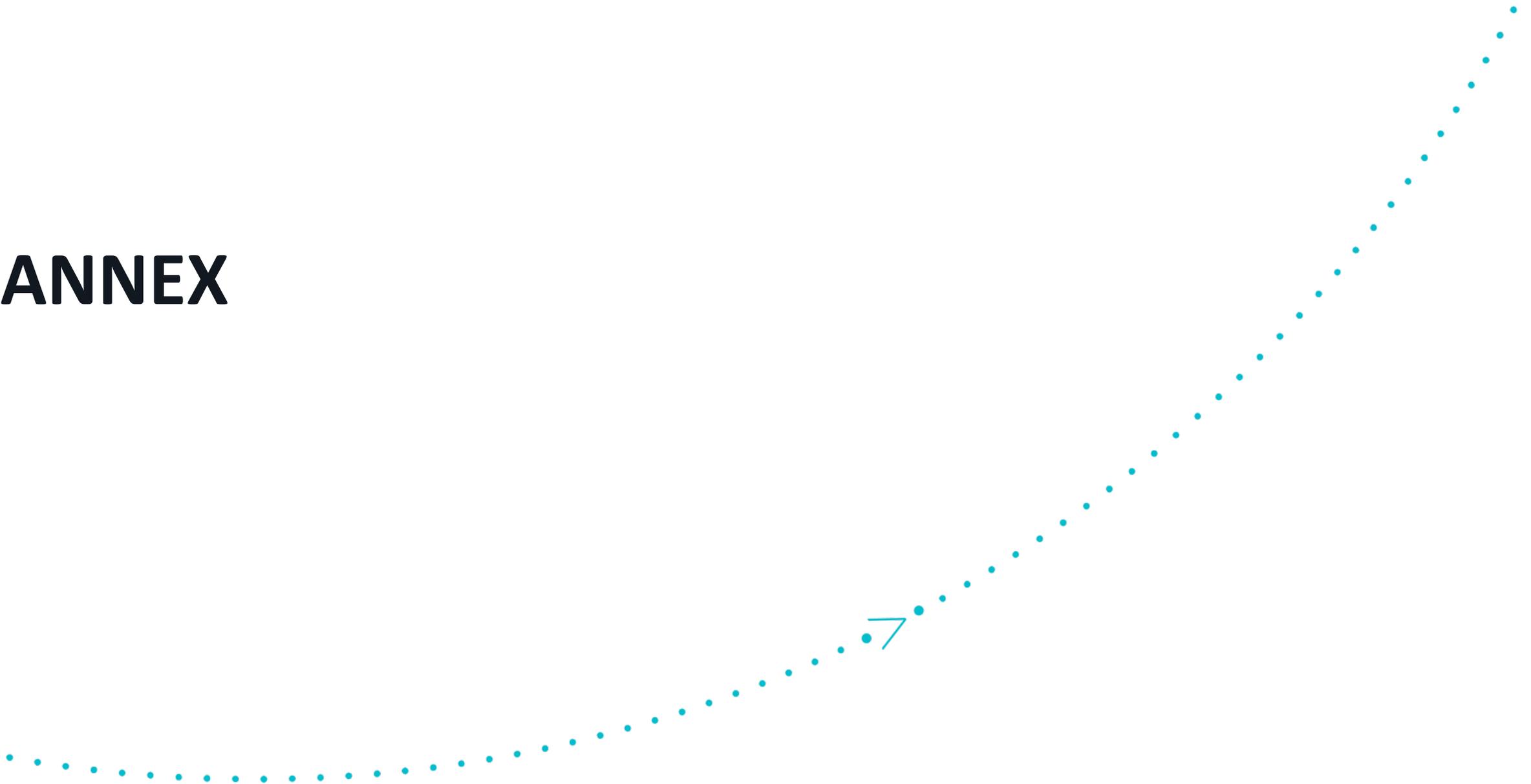
## We model emissions reduction potential based on representative investment cases across six potential high-priority mitigation sectors for the CESA

Investment Sector	Representative Investment(s)	Share of CESA Investment (%)	Total Investment over 10 years (\$ billion)	2030 Annual Emissions Reductions (million metric tons)	2030 Annual Emissions Reductions as Share of 2018 GHG emissions (%)	2030 Annual Emissions Reductions as share of required 2030 emissions reductions on 2050 net-zero pathway (%)	Cumulative Emissions Reductions 2021-2030 (million metric tons)
Renewable Energy	Solar PV, Onshore Wind, Hydro	40%	350	230	3.5%	10.3%	1,300
Grid Technology	Energy storage, Smart meters	10%	88	38	0.6%	1.6%	210
Building Efficiency	Rooftop Solar	15%	130	53	0.8%	2.3%	270
Industrial Decarbonisation	Carbon Capture and Storage	16%	140	32	0.5%	1.4%	140
Clean Transport	Electric vehicles, Electric Buses, Charging*	14%	120	13	0.2%	0.6%	81
Agriculture	Reforestation	5%	44	89	1.3%	3.9%	490
<b>Total</b>	-	<b>100%</b>	<b>880</b>	<b>460</b>	<b>6.9%</b>	<b>20.2%</b>	<b>2,500</b>

\* Charging infrastructure is excluded from emissions reduction calculations to avoid potential double counting with direct electric vehicle and bus investments

Numbers rounded to 2 significant figures / 1 decimal place. Column totals may not match listed totals due to rounding.

# ● ANNEX



## Additional detail on how CESA's \$100 billion in federal capitalization can support \$880 billion in investments and 12 million jobs over 10 years (1)

- CESA Capitalization Assumptions

- ◇ Year-three bond market leverage at a ratio of 3:1 provides \$70 billion in additional investment capital
- ◇ Private sector leverage through co-investment ranges from 3.5:1 to 6.25:1 across different instruments

Funding type	CESA supported investment(\$ billion, CESA investment + leveraged private investment)										Total
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
Fast start grants	15	15	0	0	0	0	0	0	0	0	30
Fast start low-cost loans	59	59	6	6	6	7	8	9	10	11	181
Leveraged climate bank investment	0	0	151	151	151	24	30	32	65	69	674
<b>Total</b>	<b>74</b>	<b>74</b>	<b>158</b>	<b>158</b>	<b>158</b>	<b>31</b>	<b>37</b>	<b>41</b>	<b>75</b>	<b>79</b>	<b>884</b>

## Additional detail on how CESA's \$100 billion in federal capitalization can support \$880 billion in investments and 12 million jobs over 10 years (2)

- Job creation details

- ◇ Job creation by investment case, inc. share of direct jobs (after 10 years)

- ◇ Annual and cumulative job creation

	Renewable Energy	Grid Technology	Building Efficiency	Industrial Decarbonisation	Clean Transport	Agriculture	Total
Jobs created after 5 years	1.7	0.4	0.6	0.7	1.7	0.4	5.5
Jobs created after 10 years	2.6	0.7	1.0	1.8	4.9	1.0	12.0
Share of direct jobs (%)	57%	56%	64%	50%	66%	62%	40%

	Jobs created by CESA investments (job years, millions)									
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Annual jobs created	0.4	0.6	1.2	1.5	1.7	1.2	1.1	1.2	1.4	1.6
Cumulative jobs created	0.4	1.0	2.3	3.8	5.5	6.7	7.9	9.0	10.4	12.0

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