

Report

Deep Decarbonization Latin America Project - Argentina -

December 2020

Review of proposed mitigation actions

- ANNEXES -

Report Activity II-AR.1

New and existing mitigation actions

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I. Annexes

Annex A: List of mitigation options, investment requirements and status



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Annex B: Mitigation measures factsheets

This annex summarizes key features of the assessed energy, transport and agriculture mitigation measures included in the National Sectoral and Climate Change Action Plans¹ based on the available information surveyed by FTDT and on the insights obtained during the stakeholder consultations.

Since the document is a continuous work in progress, it will include new information according to the developments of the project and its milestones.

The current version includes, for most actions:

- Sector/ subsector
- Description
- Emission reductions in 2030 (unconditional and "additional"/conditional).
- Status and assessment.
- Preliminary funding requirements.
- Stated source of funding.
- Key metrics.
- Current and target values.
- The stakeholders' assessment on the likelihood to become successful by 2030.
- The barriers' relative strength by type.
- When possible, a brief note explaining why the action is on track to fulfil its targets or if it is not.


¹ National Transport and Climate Change Action Plan, National Energy and Climate Change Action Plan, National Industry and Climate Change Action Plan, National Infrastructure and Territory, and Climate Change Action Plan and National Agriculture and Climate Change Action Plan


1. Energy

Sector:	Energy			
Subsector:	Supply			
Title				Reductions 2030 MtCO_{2e}
Large-scale penetration of non-conventional renewable power generation in the national grid	Unconditional		Additional	
	17.55		4.61	
Description	Status:		Under construction / development	
Consists on increasing the penetration of renewables to the grid in additional 8,000 MW by 2025.		○ Needs more efforts		
Funding requirements		Source of funding		
Unsecured		Private		
Key metrics:	a) Share of the on-grid electricity demand supplied by renewables. b) Increase renewable generation installed capacity in 8,000 MW by 2025.			
Target value	Current value	Stakeholders' likelihood assessment		
25%	8.9%	Very unlikely		
13,700 MW	3,734 MW			
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
36%	9%	33%	14%	9%
Why does it need more efforts?				
The capacity auctioned during the RenovAr rounds is insufficient to comply with the medium and long-term targets, and new rounds should be launched in a context of economic and financial uncertainty.				

Sector:	Energy			
Subsector:	Supply			
Title				Reductions 2030 MtCO₂e
Distributed renewable power generation	Unconditional		Additional	
	0.88		-	
Description	Status:		Under construction / development	
Consists on the generation of electricity at residential and commercial level connected to the grid, using renewable sources		○ Needs more efforts		
Funding requirements		Source of funding		
Unsecured		Private		
Key metrics:	Installed capacity of distributed renewable power generation by 2030.			
Target value	Current value	Stakeholders' likelihood assessment		
1,000 MW	2 MW	N/A		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
Why does it need more efforts?				
Provinces need to adhere to the distributed energy promotion law, and province distribution regulators need to adopt the standards for the implementation.				

Sector:	Energy			
Subsector:	Supply			
Title				Reductions 2030 MtCO₂e
Increasing the blend of biofuels in liquid fossil fuels	Unconditional		Additional	
	8.09		1.06	
Description	Status:		Under construction / development	
Consists on maintaining a minimum mandatory share of 10% of biodiesel in diesel blends and a minimum 12% of bioethanol in gasoline blends, increasing the effective blend to 16% by implementing flex fuel vehicles.		● On track		
Funding requirements		Source of funding		
Unsecured		Private		
Key metrics:	a) Effective share of biodiesel in diesel blends. b) Effective share of bioethanol in gasoline blends.			
Target value	Current value	Stakeholders' likelihood assessment		
10%	10%	Very likely / likely		
16%	12%			
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
10%	5%	0%	75%	10%
Why is it on track?				
Although the promotion law is about to expire, and it is currently being discussed in the Congress, current minimum shares in the blends serve as a basis for complying with the targets set in the sectoral plan.				

Sector:	Energy			
Subsector:	Supply			
Title				Reductions 2030 MtCO₂e
Large scale hydro power generation	Unconditional		Additional	
	6.95		0.25	
Description	Status:		Financed obtained	
a) Aña Cua, Project (over Yacyreta) (276 MW), under construction (2019) b) El Tambolar (70 MW), under construction; c) Condor Cliff (950 MW) & La Barrancosa (360 MW), Under construction, with issues; d) Chihuido I (637 MW): Funding not closed, e) Portezuelo del Viento (216 MW); Under tender process.		 On track		
Funding requirements		Source of funding		
Secured		EXIM/ Multilateral /Development Banks		
Unsecured		Public/ EXIM/ Multilateral Development Banks		
Key metrics:	a) New hydro installed capacity (MW)			
Target value	Current value	Stakeholders' likelihood assessment		
2,509 MW	-	Likely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
30%	12%	34%	22%	1%
Why is it on track?				
Most of the committed projects have already obtained financing and are currently under construction.				

Sector:	Energy			
Subsector:	Supply			
Title				Reductions 2030 MtCO₂e
Nuclear power generation	Unconditional		Additional	
	10.79		3.00	
Description	Status:		Planned	
<p>Increasing nuclear power plants capacity in 4,272 MW by 2030</p> <ul style="list-style-type: none"> a) Major overhaul of CN Embalse – Executed 2019; b) Proyecto CAREM 25; Under construction (pilot); c) Major overhaul of Atucha I; d) IV Nuclear Power plant (1,200 MW); Financed by Chinese EXIM. e) 3x CAREM 150: 450 MW, Still under feasibility studies. 			 Not on track	
Funding requirements		Source of funding		
Secured		EXIM/ Multilateral /Development banks		
Undisclosed		EXIM/ Multilateral /Development banks		
Key metrics:	New nuclear installed capacity and overhauls (MW).			
Target value	Current value	Stakeholders' likelihood assessment		
2,727 MW	683 MW	Very likely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
39%	9%	29%	19%	4%
Why is it not on track?				
<p>Argentina's track record on significant delays in nuclear power plant constructions, in addition to the challenges associated to developing (CAREM) and adopting (IV power plant) new technologies make it excessively challenging to complete the proposed projects.</p>				

Sector:	Energy			
Subsector:	Supply			
Title				Reductions 2030 MtCO₂e
Off-grid renewable power generation (PERMER)	Unconditional		Additional	
	0.05		-	
Description				Status: Under construction / development
Consists on installing small-scale solar PV equipment in rural areas.				🟡 On track
Funding requirements		Source of funding		
212 MMUSD Secured		Public & EXIM/ Multilateral / Development bank		
Key metrics:	PERMER II renewable power generation (MWh): new operational facilities			
Target value	Current value	Stakeholders' likelihood assessment		
70.606 MWh/year	-	Very likely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
	30%		60%	
Why is it on track?				
PERMER is a successful programme which began in year 2000 and is currently finishing its second stage, operating along the span of more than 5 successive governments.				


Sector:	Energy			
Subsector:	Supply			
Title				Reductions 2030 MtCO₂e
Fossil fuel switch of liquid fossil fuels for power generation by natural gas	Unconditional		Additional	
	5.52		-	
Description	Status:		Under construction / development	
Consists on displacing diesel oil and heavy fuel oil for power generation by the increased availability of natural gas.		○ Needs more efforts		
Funding requirements		Source of funding		
Secured		Private & public		
Key metrics:	Share of natural gas over total thermal fossil fuels consumption for power generation.			
Target value	Current value	Stakeholders' likelihood assessment		
99%	92.6%	Very likely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
85%	15%	-	-	-
Why does it need more efforts?				
Argentina's natural gas production resumed its decline in 2020 after 4 years of steady growth, compromising the share of natural gas in power generation due to increased needs for liquid fossil fuels.				

Sector:	Energy			
Subsector:	Supply			
Title				Reductions 2030 MtCO₂e
Increasing efficiency in power generation	Unconditional		Additional	
	3.32		-	
Description				Status: Under construction. / development
Increasing the overall interconnected power system efficiency by adding combined heat and power plants and by closing open cycles.				● On track
Funding requirements		Source of funding		
Secured		Private		
Key metrics:	New capacity additions of CHP and combined cycles.			
Target value	Current value	Stakeholders' likelihood assessment		
1,810 MW	1,200 MW	Very likely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x		x		
Why is it on track?				
The PPAs celebrated under Resolution 287/2017 have resulted in the incorporation of new installed capacity with slight delays and is on track to complete the target value during the first half of 2021.				

Sector:	Energy			
Subsector:	Demand			
Title				Reductions 2030 MtCO₂e
Water economizers	Unconditional		Additional	
	-		3.10	
Description				Status: Planned
Consists on installing water economizers in households and commerce.				● Not on track
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:	Number of water economizers sold.			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	Likely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
31%	4%	27%	20%	18%
Why is it not on track?				
Despite several years under development, the large-scale adoption of water economizers is still far from going mainstream.				

Sector:	Energy			
Subsector:	Demand			
Title				Reductions 2030 MtCO₂e
Solar water heaters	Unconditional		Additional	
	0.64		0.39	
Description			Status:	Planned
Consists on installing solar thermal water heaters for households.			● Not on track	
Funding requirements		Source of funding		
Unsecured		Private		
Key metrics:	Square meters of solar collectors installed by year.			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	N/A		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x	x		x	
Why is it not on track?				
Despite several years under development, the large-scale adoption of solar thermal water heater is still far from going mainstream and is not sufficiently promoted by government agencies or regulation.				


Sector:	Energy			
Subsector:	Demand			
Title				Reductions 2030 MtCO₂e
Public lighting	Unconditional		Additional	
	4.62		-	
Description	Status:		Executed	
Consists on replacing public lamps by LED and High-pressure sodium lamps.		<input checked="" type="radio"/> On track		
Funding requirements		Source of funding		
Secured		Public		
Key metrics:	a) % of LED lamps over total public lighting b) % of High-pressure Sodium lamps over total public lighting			
Target value	Current value	Stakeholders' likelihood assessment		
74%	25%	Very likely / likely		
26%	18%			
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
56%	6%	19%	13%	6%
Why is it on track?				
Apart from specific government initiatives, technology developments are gradually displacing older lamps with the target technologies.				

Sector:	Energy			
Subsector:	Demand			
Title				Reductions 2030 MtCO₂e
Efficiency in home appliances	Unconditional		Additional	
	10.62		1.30	
Description	Status:		Under construction / development.	
Consists on replacing household equipment by more efficient appliances, including reduced stand-by power consumption and set-point measures for HVAC.		 On track		
Funding requirements		Source of funding		
Unsecured		Private		
Key metrics:	% of household equipment ranked A3+ and A5+			
Target value	Current value	Stakeholders' likelihood assessment		
70%	N/A	Likely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
31%	4%	27%	20%	18%
Why is it on track?				
<p>Although preferences are still biased by the appliance acquisition costs, initial government efforts in labeling have been complemented by natural market developments, and current sales have increasingly cut lower efficiency equipment supply.</p>				

Sector:	Energy			
Subsector:	Demand			
Title				Reductions 2030 MtCO₂e
Heat pumps	Unconditional		Additional	
	-		3.20	
Description			Status:	Planned.
Consists on replacing balanced draft stoves by heat pumps in households.			○ Needs more efforts	
Funding requirements		Source of funding		
Unsecured		Private		
Key metrics:	% of heat pumps over household heating equipment.			
Target value	Current value	Stakeholders' likelihood assessment		
90%	N/A	Likely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
31%	4%	27%	20%	18%
Why does it need more efforts?				
There is still lack of awareness on the benefits of this type of equipment, while Argentina's cultural trend towards the use of natural gas for heating still dominates consumer preferences.				


Sector:	Energy			
Subsector:	Demand			
Title				Reductions 2030 MtCO₂e
Enhanced thermal envelope in buildings	Unconditional		Additional	
	-		1.21	
Description			Status:	Planned
Consists on enhancing the thermal enclosures of residential buildings.			○ Needs more efforts	
Funding requirements		Source of funding		
Unsecured		Private		
Key metrics:	Number of enhanced households.			
Target value	Current value	Stakeholders' likelihood assessment		
5.7 Million	N/A	Likely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
31%	4%	27%	20%	18%
Why does it need more efforts?				
The lack of adequate energy price signals and the scarce insertion of energy efficiency in the curricula or architectural and engineering programmes delay the adoption of best practices regarding thermal enclosure in buildings.				

Sector:	Energy			
Subsector:	Demand			
Title				Reductions 2030 MtCO₂e
Efficient tankless water heaters	Unconditional		Additional	
	0.38		1.96	
Description	Status:		Planned	
Consists on replacing current equipment with more efficient tankless (non pilot) water heaters.		○ Needs more efforts		
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:	a) % of "A" efficiency rate over installed capacity. b) Replacement of storage water heaters with instantaneous water heaters.			
Target value	Current value	Stakeholders' likelihood assessment		
100%	(Sales 100%)	Likely		
70%				
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
31%	4%	27%	20%	18%
Why does it need more efforts?				
Although several legislative initiatives have failed to pass, domestic suppliers are increasingly including efficient tankless non-pilot-light water heaters. However, tank water heater still dominates the domestic market.				

Sector:	Energy			
Subsector:	Demand			
Title				Reductions 2030 MtCO₂e
Household lighting	Unconditional		Additional	
	20.37		-	
Description	Status:		Executed	
Consists on replacing halogen and CFL light bulbs with LED light bulbs.			 On track	
Funding requirements		Source of funding		
Secured		Public		
Unsecured		Private		
Key metrics:	% Led light bulbs over installed capacity.			
Target value	Current value	Stakeholders' likelihood assessment		
100%	62%	Very likely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
50%	0%	13%	31%	6%
Why is it on track?				
Kickstarted by government initiatives, led light bulbs are gradually taking over new installations due to natural market inertia and lowering costs.				

Sector:	Energy			
Subsector:	Industry			
Title				Reductions 2030 MtCO₂e
Efficient electric motors	Unconditional		Additional	
	2.49		1.74	
Description	Status:		Planned	
Consists on replacing three-phase motors with more efficient models and variable speed drives.			○ Needs more efforts	
Funding requirements		Source of funding		
Unsecured		Private & Public		
Key metrics:	a) % of IE3 rated motors over installed capacity. b) % of motors including variable speed drives.			
Target value	Current value	Stakeholders' likelihood assessment		
82%		Very likely		
30%				
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
54%	5%	13%	18%	10%
Why does it need more efforts?				
Despite several years under development, the large-scale adoption of IE3 motors is still far from going mainstream due to the lack of economic incentives in a context of artificially low energy prices (except for Large users ("GU")).				

Sector:	Energy			
Subsector:	Industry			
Title				Reductions 2030 MtCO₂e
Efficient Industrialized Construction Systems	Unconditional		Additional	
	0.38		-	
Description	Status:		Planned	
Consists on implementing industrialized construction systems, such as steel framing, panels and pre-built components.			○ Needs more efforts	
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:	Surface constructed by these means per year. (million square meters).			
Target value	Current value	Stakeholders' likelihood assessment		
12	3	N/A		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
	x	x	x	x
Why is it not on track?				
Efficient industrialized systems are still emerging and lack of sufficient demand and awareness to gain scale.				

Sector:	Energy			
Subsector:	Industry			
Title				Reductions 2030 MtCO₂e
Efficient industrial lighting	Unconditional		Additional	
	0.40		-	
Description	Status:		Planned	
Consists on replacing current light bulbs (mostly fluorescent) with LED.			 On track	
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:	% of led lighting over total.			
Target value	Current value	Stakeholders' likelihood assessment		
80%	N/A	N/A		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x	x		x	
Why is it on track?				
Kickstarted by government initiatives, led light bulbs are gradually taking over new installations due to natural market inertia and lowering costs.				

Sector:	Energy			
Subsector:	Industry			
Title				Reductions 2030 MtCO₂e
Shut-case commercial fridges	Unconditional		Additional	
	0.45		-	
Description			Status:	Planned
Consists on replacing open commercial fridges with closed fridges in order to enhance thermal isolation.			● Not on track	
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:	Number of medium-sized supermarkets reached.			
Target value	Current value	Stakeholders' likelihood assessment		
8,000	N/A	N/A		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x			x	
Why is it not on track?				
This action is still under development and has shown no substantive advancements so far.				

Sector:	Energy			
Subsector:	Industry			
Title				Reductions 2030 MtCO₂e
Resource efficiency in the food industry	Unconditional		Additional	
	N/A		N/A	
Description	Status:		Planned	
Consists on enhancing processes for resource efficiency.			● Not on track	
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:				
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	N/A		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
N/A	N/A	N/A	N/A	N/A
Why is it not on track?				
This action is still under development and has shown no substantive advancements so far.				

Sector:	Energy			
Subsector:	Industry			
Title	Recovery and use of residual currents in the petrochemical industries			Reductions 2030 MtCO₂e
			Unconditional	Additional
			-	0.01
Description			Status:	Planned
Consists on the recovery and use of gasses currently burnt without harnessing the gasses' energy potential.			● Not on track	
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:				
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	Likely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
23%	4%	15%	31%	27%
Why is it not on track?				
This action is still under development and has shown no substantive advancements so far. Additionally, several constraints exist, both related to technical and regulatory issues.				

Sector:	Energy			
Subsector:	Industry			
Title				Reductions 2030 MtCO₂e
Solar PV and wind power in industry	Unconditional		Additional	
	0.12			
Description			Status:	Planned
Consists on installing small capacity solar PV and wind power for industry own use.			○ Needs more efforts	
Funding requirements		Source of funding		
Secured Undisclosed		Public Private		
Key metrics:	Installed capacity at industrial level.			
Target value	Current value	Stakeholders' likelihood assessment		
100 MW	20 MW	Likely / Unlikely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
36%	2%	36%	13%	13%
Why does it need more efforts?				
Although there are specific market instruments for promoting the use of renewable energy in industry (such as MaTer), adoption is still driven by larger corporate policies and niche markets.				

Sector:	Energy			
Subsector:	Industry			
Title				Reductions 2030 MtCO₂e
Solar thermal energy for Industry	Unconditional		Additional	
	0.73		-	
Description			Status:	Planned
Consists on installing solar thermal heating equipment in industry.			● Not on track	
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:	Number of solar collectors for industrial use.			
Target value	Current value	Stakeholders' likelihood assessment		
1,300,000	33,750	Likely / Unlikely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
36%	2%	36%	13%	13%
Why is it not on track?				
Despite several years under development, the adoption of solar thermal energy in the industry is not sufficiently promoted by government agencies or regulation and is far for going mainstream.				

Sector:	Energy			
Subsector:	Industry			
Title				Reductions 2030 MtCO₂e
Biogas production	Unconditional		Additional	
	-		0.11	
Description	Status:		Under construction / development	
Consists on installing bio-digestors in order to replace LPG for thermal purposes and other fuels for power generation.		○ Needs more efforts		
Funding requirements		Source of funding		
Secured		Public		
Undisclosed		Private		
Key metrics:	Number of installations @ 250 kW average capacity.			
Target value	Current value	Stakeholders' likelihood assessment		
100	N/A	Likely / Unlikely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
36%	2%	36%	13%	13%
Why does it need more efforts?				
Although there are specific market instruments for promoting the use of renewable energy in industry (such as MaTer), adoption is still driven by larger corporate policies and niche markets.				

Sector:	Energy			
Subsector:	Industry			
Title				Reductions 2030 MtCO₂e
Use of Black Liquor in the pulp and paper industry	Unconditional		Additional	
	-		0.76	
Description	Status:		Planned	
Consists on doubling the current use of black liquor, displacing the use of natural gas and HFO in the pulp & paper industry		○ Needs more efforts		
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:	Double the current use of black liquor.			
Target value	Current value	Stakeholders' likelihood assessment		
2X	1X	Likely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
23%	4%	15%	31%	27%
Why does it need more efforts?				
This action is still under development and has shown no substantive advancements so far. Additionally, several constraints exist, both related to cultural and regulatory issues.				

Sector:	Energy			
Subsector:	Industry			
Title				Reductions 2030 MtCO₂e
Circular Economy – reuse of scrap residues	Unconditional		Additional	
	1.37		0.03	
Description	Status:		Planned	
<ul style="list-style-type: none"> a) Recovery of ferrous metals b) Recovery of aluminum c) Recovery of lead from batteries d) Recovery of copper e) Recovery of plastics f) Recovery of paper g) Recovery of unused tires 			● Not on track	
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:	See below			
Target value	Current value	Stakeholders' likelihood assessment		
720,000 t of iron	N/A	Likely		
2% of available aluminum	N/A			
95% of available lead in batteries	N/A			
20,500 t of copper	N/A			
20% of PE and PP; 45% of PET	N/A			
1.05 X of current recovery of paper	1X			
60,000 tons of tire materials recovered	15,000 t			
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
23%	4%	15%	31%	27%
Why is it not on track?				
<p>This action has shown no substantive advancements so far. Additionally, several constraints exist, most notably the need to adapt the hazardous residues law and promoting transparent markets for recycled materials.</p>				

Sector:	Energy			
Subsector:	Industry			
Title				Reductions 2030 MtCO₂e
Alternative fuels in the cement industry	Unconditional		Additional	
	0.1		0.21	
Description	Status:		Planned	
Consists on replacing traditional fuels with high-heat residues.			● Not on track	
Funding requirements		Source of funding		
5-20 MMUSD per installation. Secured Undisclosed		Public (BICE) Private		
Key metrics:	% of traditional fuels substituted.			
Target value	Current value	Stakeholders' likelihood assessment		
5% (unc.)- 15% (add.)	0%	N/A		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
23%	4%	15%	31%	27%
Why is it not on track?				
This action has shown no substantive advancements so far. Additionally, several constraints exist, most notably the need of financing capital intensive equipment.				

Sector:	Energy			
Subsector:	Industry			
Title				Reductions 2030 MtCO₂e
Increase of additives in the cement industry	Unconditional		Additional	
	-		0.08	
Description	Status:		Planned	
Consists on partially replacing clinker Portland with mineral additives.			● Not on track	
Funding requirements		Source of funding		
5-12 MMUSD per installation. Undisclosed		Private		
Key metrics:	Clinker factor (%)			
Target value	Current value	Stakeholders' likelihood assessment		
70%	71.4%	N/A		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x	x			
Why is it not on track?				
This action has shown no substantive advancements so far. Additionally, several constraints exist, most notably the need of financing capital intensive equipment.				


Sector:	Energy			
Subsector:	Infrastructure			
Title				Reductions 2030 MtCO₂e
Minimum quality standards for social-interest households	Unconditional		Additional	
	N/A		N/A	
Description			Status:	Under construction / development
Consists on setting standards for incorporating energy efficiency and renewable features to new social interest households.			● Not on track	
Funding requirements		Source of funding		
Secured		Public		
Unsecured		Multilateral/ EXIM /development banks		
Key metrics:	Number of households built under new standards.			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	Unlikely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
50%	0%	13%	31%	6%
Why is it not on track?				
Despite isolated government initiatives and setting certain standards, the adoption of energy efficiency standards in social interest households is still incipient.				

Sector:	Energy			
Subsector:	Infrastructure			
Title				Reductions 2030 MtCO₂e
Enhancement of <i>social interest</i> households with qualitative deficit - <i>Best Sustainable Housing</i>	Unconditional		Additional	
	7.38		-	
Description	Status:		Under construction/development	
Consists on enhancing —among other features— energy efficiency and connection to the power grid through the <i>Mejor Hogar Sustentable</i> programme.		● Not on track		
Funding requirements		Source of funding		
Unsecured Undisclosed		Public Private		
Key metrics:	Number of enhanced households.			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	Likely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
38%	0%	26%	32%	27%
Why is it not on track?				
Despite government initiatives, efforts and setting certain standards, the adoption of energy efficiency standards in social interest households is still incipient.				

Sector:	Energy			
Subsector:	Infrastructure			
Title				Reductions 2030 MtCO₂e
Access to natural gas in households	Unconditional		Additional	
	N/A		-	
Description	Status:		Under construction/development	
Consists on connected new households to the grid when these are near the current network infrastructure.		○ Needs more efforts		
Funding requirements		Source of funding		
Secured		Public		
Key metrics:	Number of new households connected to the grid under de <i>Mejor Hogar Gas</i> programme.			
Target value	Current value	Stakeholders' likelihood assessment		
82,593	33,037	Likely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
53%	0%	27%	20%	0%
Why does it need more efforts?				
Despite government initiatives the connection of households currently using LPG to natural gas grids has faced several bottlenecks, notably the lack of willing natural gas installers.				

Sector:	Energy			
Subsector:	Infrastructure			
Title				Reductions 2030 MtCO₂e
Development of new sustainable private households	Unconditional		Additional	
	N/A		-	
Description				Status: Planned
Consists on increasing energy efficiency of private households and promoting the installation of solar thermal heating.				○ Needs more efforts
Funding requirements		Source of funding		
Secured		Public (credits)		
Undisclosed		Private		
Key metrics:	Number of approved households under these criteria.			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	TBD		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x			x	
Why does it need more efforts?				
More than a decade of artificially low energy prices and the lack of incentives have culturally biased homeowners towards privileging lower construction and appliance costs vs. efficient construction and solar thermal water heaters.				


2. Transport

Sector:	Transport			
Subsector:	Passenger / Railway			
Title				Reductions 2030 MtCO₂e
Hierarchization of the railway - Development of Regional Express Railways (RER)	Unconditional		Additional	
	0.733		-	
Description	Status:		Under construction / development	
Consists on the development of infrastructure to enhance the Metropolitan Area of Buenos Aires' (AMBA) network connectivity and replacing diesel engines with electric trains		 Halted		
Funding requirements		Source of funding		
14,000 MMUSD		Public & Multilateral/EXIM /Development banks		
Secured		Public & Multilateral/EXIM/Development banks		
Unsecured		Public & Multilateral/EXIM/Development banks		
Key metrics:	a) Passengers per year per branch. b) Electricity consumption per year per branch.			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	TBD		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
	x	x		

Sector:	Transport			
Subsector:	Passenger / Railway			
Title	Hierarchization of the railway — Construction of non-level crossings			Reductions 2030 MtCO₂e
			Unconditional	Additional
			0.041	-
Description	Consists on the construction of non-level crossings in order to enhance the vehicle circulation by reducing congestion and enhancing security			Status: Under construction / development
				○ Needs more efforts
Funding requirements	Source of funding			
Secured	Public & Multilateral/EXIM /Development banks			
Unsecured	Public & Multilateral/EXIM/Development banks			
Key metrics:	a) Number of new non-level crossings (out of 828). b) Annual Average Daily traffic through the new non-level crossings.			
Target value	Current value	Stakeholders' likelihood assessment		
120	N/A	TBD		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
			x	

Sector:	Transport			
Subsector:	Passenger / Road			
Title	Development of low emission mobility – Energy efficiency labeling			Reductions 2030 MtCO₂e
			Unconditional	Additional
			N/A	-
Description			Status:	Under construction / development
Consists on implementing energy efficiency labels to light vehicles, and possibly extending it in the medium term to medium and heavy-duty vehicles.			○ Needs more efforts	
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:	Number of labeled vehicle sales / total.			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	TBD		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x			x	

Sector:	Transport			
Subsector:	Passenger / Road			
Title				Reductions 2030 MtCO₂e
Development of low emission mobility – Promotion of low emission light vehicles	Unconditional		Additional	
	0.465		-	
Description			Status:	Planned
Consists on the introduction of light low emission electric vehicles, beginning with captive fleets.			● Not on track	
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:	Number of Light EV sold over total			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	TBD		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x	x	x	x	x

Sector:	Transport			
Subsector:	Passenger / Road			
Title				Reductions 2030 MtCO₂e
Development of low emission mobility – Promotion of alternative energy buses	Unconditional		Additional	
	0.154		-	
Description	Status:		Planned	
Consists on the introduction of electric and hybrid buses,	 Not on track			
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:	Number of electric buses in the Metropolitan Area of Buenos Aires / total.			
Target value	Current value	Stakeholders' likelihood assessment		
30% (2030)	<1%	TBD		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x	x	x	x	x

Sector:	Transport			
Subsector:	Passenger / Road			
Title				Reductions 2030 MtCO₂e
Urban passenger transport – Renewal of bus fleets (Euro III to Euro V)	Unconditional		Additional	
	0.065		-	
Description			Status:	Planned
Consists on replacing existing Euro III compliant buses with Euro V in metropolitan areas.			○ Needs more efforts	
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:	New units' distance/year.			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	TBD		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
	x		x	x

Sector:	Transport			
Subsector:	Passenger / Road			
Title	Urban passenger transport – Implementation of Metrobuses			Reductions 2030 MtCO₂e
			Unconditional	Additional
			0.457	ND
Description	Consists on the construction specific bus lanes for rapid transit buses (metrobus)			Status: Under construction / development / Halted
				● On track
Funding requirements	Source of funding			
Secured	Public			
Key metrics:	New constructed bus lanes.			
Target value	Current value	Stakeholders' likelihood assessment		
22 (2030)	N/A	TBD		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
			x	

Sector:	Transport			
Subsector:	Passenger / Air			
Title	Urban passenger transport — Modernization of commercial aviation			Reductions 2030 MtCO₂e
			Unconditional	Additional
			0.003	-
Description	Consists on adopting more efficient airplanes, enhancing fuel consumption and air traffic by the adoption of better routes, and the modernization of the airport infrastructure.			Status: Under construction / development
				○ Needs more efforts
Funding requirements		Source of funding		
Secured		Public		
Key metrics:	Fuel consumption per passenger per airline.			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	TBD		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x	x		x	

Sector:	Transport			
Subsector:	Passenger / Railway			
Title				Reductions 2030 MtCO₂e
Recovery of railways — Re-establishment of inter-urban passenger rail services	Unconditional		Additional	
	0.030		-	
Description	Status:		Under construction / development	
Consists on the investment on infrastructure and railway rolling stock, as well as in better management systems in order to promote the switch from road to railway transport, mostly focused on the routes between Buenos Aires to Mar del Plata, and Buenos Aires to Rosario.		● Halted		
Funding requirements		Source of funding		
Secured		Public		
Key metrics:	Number of passengers per branch per year.			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	TBD		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
			x	

Sector:	Transport			
Subsector:	Freight / Railway			
Title				Reductions 2030 MtCO₂e
Hierarchization of the railway (freight) – Rail Freight Investment Plan truck-to-rail cargo switch	Unconditional		Additional	
	1.873		-	
Description	Status:		Planned/ disputed	
Consists on promoting the switch from truck to rail freights through the rehabilitation, modernization and the habilitation of new branches, as well as railway rolling stock,		● Halted		
Funding requirements		Source of funding		
14,982 MMUSD until 2035 Secured Undisclosed		Public Public & Multilateral/EXIM /Development banks		
Key metrics:	ton-km per year through enabled branches over total ton-km per year			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	TBD		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x	x		x	x


Sector:	Transport			
Subsector:	Freight / Road			
Title	Enhancement of road freight transport efficiency – Smart Transport Programme			Reductions 2030 MtCO₂e
			Unconditional	Additional
			0.693	-
Description	Consists on creating a voluntary programme for freight transport companies regarding enhancing truck load factors, aerodynamics, efficient tires, and operational enhancements, among others.			Status: Planned
				○ Needs more efforts
Funding requirements	Source of funding			
Secured	Public			
Key metrics:	Number of trucks adopting the programme per year			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	TBD		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x		x	x	

Sector:	Transport			
Subsector:	Freight / Road			
Title	Enhancement of road freight transport efficiency – Truck driver training			Reductions 2030 MtCO₂e
			Unconditional	Additional
			1.040	-
Description	Consists on capacity building actions focused on truck drivers according to smart driving standards.			Status: Planned
				○ Needs more efforts
Funding requirements	Source of funding			
Secured	Public			
Key metrics:	Number of trained drivers per year.			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	TBD		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
	x		x	

Sector:	Transport			
Subsector:	Freight / Road			
Title				Reductions 2030 MtCO₂e
Enhancement of road freight transport efficiency – Renewal of truck fleets with scrapping	Unconditional		Additional	
	0.336		-	
Description	Status:		Under construction / development	
Consists on enhancing the road freight transport fleet efficiency by replacing existing vehicles and scrapping those being replaced.		○ Needs more efforts		
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:	a) Number of newly acquired vehicles under the programme. b) Number of scrapped vehicles.			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	TBD		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x			x	x

Sector:	Transport			
Subsector:	Freight / Road			
Title	Enhancement of road freight transport efficiency – National Road Plan to 2025			Reductions 2030 MtCO₂e
			Unconditional	Additional
			N/A	N/A
Description			Status:	Under construction / development
Consists on the development of road infrastructure and specific materials enhancing the flow and transit.		○ Needs more efforts		
The plan involves the construction of 2,800 km of new highways, 2,500 km of safe routes, the rehabilitation of 13,000 km of routes and the paving of 2,000 km of existing routes.				
Funding requirements		Source of funding		
37,000 MMUSD until 2027 Secured Unsecured		Public Multilateral/EXIM /Development banks		
Key metrics:	a) Number of km. b) Annual Average Daily traffic through the new/ enhanced highways / roads.			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	TBD		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x	x		x	

Sector:	Transport			
Subsector:	Freight / Road			
Title				Reductions 2030 MtCO₂e
Enhancement of road freight transport efficiency – Speed limiting devices for trucks	Unconditional		Additional	
	N/A		N/A	
Description	Status:		Under construction / development	
Consists on the adoption of speed limiting devices in trucks.		○ Needs more efforts		
Funding requirements		Source of funding		
Unsecured		Private		
Key metrics:	Number of installations of speed limiting devices per year.			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	TBD		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
	x		x	x

Sector:	Transport			
Subsector:	Freight / Road			
Title	Enhancement of road freight transport efficiency – Paseo del Bajo			Reductions 2030 MtCO₂e
			Unconditional	Additional
			0.015	-
Description			Status:	Executed
Consists on the construction of an exclusive lane for trucks between avenues Alicia Moreau de Justo/Antártida Argentina and Huergo/Madero, in order to enhance the north-south connectivity through the city of Buenos Aires and segregate heavy from light and medium vehicles traffic.			 Completely Executed	
Funding requirements		Source of funding		
Secured		Public & Multilateral/EXIM /Development banks		
Key metrics:	Construction of the lane			
Target value	Current value	Stakeholders' likelihood assessment		
Finished				
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
	x		x	

Sector:	Transport			
Subsector:	Passenger			
Title	Non-motorized mobility – Development of bicycle paths			Reductions 2030 MtCO₂e
			Unconditional	Additional
			0.003	-
Description	Consists on the creation of specific bike lanes in the metropolitan areas and promoting the adoption of bicycles.			Status: Under construction / development
				● On track
Funding requirements	Source of funding			
Secured	Public			
Key metrics:	km of constructed lanes.			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	TBD		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
			x	

3. AFOLU

Sector:	AFOLU			
Subsector:	Silviculture			
Title				Reductions 2030 MtCO₂e
Afforestation	Unconditional		Additional	
	-		18.07	
Description			Status:	Under construction/ development
Increase the forested area from 1.38 million to 2 million hectares between 2018 and 2030			○ ○ Needs more efforts	
Funding requirements		Source of funding		
Secured		Public		
Undisclosed		Private & Multilateral, Development and/or Exim banks		
Key metrics:	c) Survey of the planted area (ha/year) by species and differentiated by forest region through the provincial forest inventories d) Annual increase of forested area of 51,322 hectares			
Target value	Current value	Stakeholders' likelihood assessment		
2 million hectares	1.38 million hectares	Likely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x		x	x	x
Why does it need more efforts?				
<p>This measure needs more efforts regarding incentives in order to make investments in the long term. Particularly, carbon capture incentives for an extensive deployment.</p> <p>Moreover, infrastructure and supply chain requirements are essential to promote the entire forestry productive sector.</p>				

Sector:	AFOLU			
Subsector:	Silviculture			
Title				Reductions 2030 MtCO₂e
Growth rate increase (genetic intervention) – Species and regions	Unconditional		Additional	
	-		-	
Description			Status:	Under construction/development / Planned (depending on species and regions)
<p>Incorporating genetic material to impact on growth rates in the forestry sector.</p> <p>Proposed mitigation action by this Project.</p>			<p>○ Needs more efforts</p>	
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:	a) Intervened growth rate / Natural growth rate (without genetic intervention)			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	Likely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
	x	x		
Why does it need more efforts?				
Need to deploy new genetic material in order to obtain results in the medium term according to a progressive adoption.				

Sector:	AFOLU			
Subsector:	Agriculture			
Title				Reductions 2030 MtCO₂e
Crop rotation	Unconditional		Additional	
	-		4.27	
Description	Status:		Planned	
Consists on reaching by 2030 a proportion of 48% of the area cultivated with cereals and 52% with oilseeds.		○ Needs more efforts		
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:	a) Area cultivated with cereals and oilseeds (ha/year).			
Target value	Current value	Stakeholders' likelihood assessment		
48% cereals	28% cereals	Likely		
52% oilseeds				
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x	x		x	x
Why does it need more efforts?				
Improve the available infrastructure for freight transport in order to make feasible the access of key traded commodities produced locally to international markets				
Withholding tax framework that promotes a balanced crop rotation.				

Sector:	AFOLU			
Subsector:	Agriculture			
Title				Reductions 2030 MtCO₂e
Soil carbon content (biochar)	Unconditional		Additional	
	TBD		TBD	
Description	Status:		Planned	
Enhanced soil properties and therefore increasing yields. Proposed mitigation action by this Project.	○ Needs more efforts			
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:	a) Biochar applied / ha			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	Likely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x	x	x		
Why does it need more efforts?				
<p>☐ Availability of biomass for biochar production (competition with other uses of biomass).</p> <p>Logistic constrains: Trade-off distance from raw material (biomass) vs distance to plantations where to be applied.</p> <p>Technological challenges for the development, construction and operation of biochar plants in Argentina.</p> <p>Lack of long-term financing alternatives for biochar plant (capital intensive).</p>				

Sector:	AFOLU			
Subsector:	Agriculture			
Title	PGPR technologies (growth promoters and nitrogen free fixers)			Reductions 2030 MtCO₂e²
			Unconditional	Additional
			TBD	TBD
Description			Status:	Under construction/ development (incipient)
The measure (included in Argentina's 3rd National Communication) consist on the promotion of the use of biological fixers of atmospheric nitrogen in wheat and maize crops and in associated pastures. This action generates an impact on GHG emissions through the relative replacement of synthetic fertilizers, increasing productivity.			○ Needs more efforts	
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:	a) N ₂ O emissions on farms where the measure is implemented; b) N ₂ O emissions on farms where the measure is not implemented (control group)			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	Likely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x	x	x		x
Why does it need more efforts?				
Capacity building regarding the benefits of this practice and uniformity of criteria among technicians with regard to these technologies. More credibility and visibility of results is needed.				
The short shelf life of these products, is an obstacle to storage. The industry is aware of this and is developing long-life products so that they can be pre-applied by producers or seed companies and their distributors.				
Creation of an official quality control body for these products, in order to facilitate the distinction between high and low quality products by private producers.				
Bacteria cannot be patented in Argentina, so it is difficult to invest in R&D on a technology that is very easily copied. Design incentives to encourage R&D (e.g. subsidies), taking into account the barriers to intellectual property.				

² The emission reduction in 2020-2030 could reach 11.6 million tCO₂eq

Sector:	AFOLU			
Subsector:	Agriculture			
Title				Reductions 2030 MtCO₂e³
Urea volatilization inhibitors	Unconditional		Additional	
	TBD		TBD	
Description	Status:		Under construction/ development (incipient)	
The measure (included in Argentina's 3rd National Communication) consist on the promotion of the use of the urease inhibitor polymer NBPT, which reduces the volatilization of urea applied on the surface by a factor of 10.		○ Needs more efforts		
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:	a) N ₂ O emissions on farms where the measure is implemented; b) N ₂ O emissions on farms where the measure is not implemented (control group)			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	Very likely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x	x	x		
Why does it need more efforts?				
Capacity building regarding the environmental, efficiency and productive benefits of this practice.				
Tax incentives that encourage the use of these technologies.				

³ The emission reduction in 2020-2030 could reach 5.1 million tCO₂eq

Sector:	AFOLU			
Subsector:	Bioenergy			
Title				Reductions 2030 MtCO₂e
Use of biomass for energy generation	Unconditional		Additional	
	3.41			
Description	Status:		Under construction/ development	
<p>The measure consists of promoting energy generation from biomass to contribute to diversification of the energy matrix and reduction of GHG emissions. Biomass will be obtained from: forestry, sugar, cereals, livestock and fruits.</p> <p>The measure comes from the Promotion of Energy Derived from Biomass Programme (PROBIOMASA, in Spanish) which is implemented in two phases: First (2018-2021): 400 MW installed power in 2021; Second (2022-2030): installed power of 2,650 MW in 2030. PROBIOMASA includes three components, and this measure addresses only component 3: thermal energy generation, specifically, referring to the replacement of the use of diesel in thermal power stations</p>		○ Needs more efforts		
Funding requirements		Source of funding		
Secured		Private		
Undisclosed		Private		
Key metrics:	<p>a) Thermal/Electrical MW from biomass</p> <p>b) Tons of biomass resources by type and final destination.</p>			
Target value	Current value	Stakeholders' likelihood assessment		
4,3 Mt of biomass replacing 1,3 m3 of diesel	N/A	Likely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
	x		x	x
Why does it need more efforts?				
<p>Capital intensive infrastructure that require local and international financing (total investment amount to install 400 MW will be approximately USD 1 billion).</p> <p>Capacity building in biomass power generation.</p>				

Sector:	AFOLU			
Subsector:	Livestock			
Title				Reductions 2030 MtCO₂e
Reduction of "Emission Intensity"	Unconditional		Additional	
	-		-	
Description	Status:		Under construction/ development	
Reduced emission by increasing the national herd extraction rate (slaughter weight and weaning rate). Proposed mitigation action by this Project.		○ Needs more efforts		
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:	a) Emission intensity: tons of CO ₂ eq/t Res with bone. b) Beef production: ratio of calves produced to total cows (T/Vc), as a driver of the weaning rate in producers; and the average slaughter weight (AW) as a driver of the extraction rate of a producer.			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	Not very likely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x	x		x	
Why does it need more efforts?				
<p>Grassland availability with growth potential.</p> <p>Incorporation of inputs and process technologies,</p> <p>Specific site analysis of each barrier for breeding and wintering is required in order to optimize production according to regional conditions.</p> <p>Information on livestock activity.</p> <p>Technical skills generation.</p> <p>Livestock farming is a medium to long term business, requiring stable and certain national contexts.</p>				

Sector:	AFOLU			
Subsector:	Livestock			
Title				Reductions 2030 MtCO₂e
Other Livestock and Intensive Bovine Systems	Unconditional		Additional	
	-		-	
Description	Status:		Under construction/ development	
<p>Estimation of the relative impact of the implementation of Biodigesters (or other techniques) on Manure Management in intensive livestock systems.</p> <p>Proposed mitigation action by this Project.</p>		○ Needs more efforts		
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:	a) Biodigesters additional installed capacity			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	Unlikely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x	x		x	
Why does it need more efforts?				
<p>Manure energy conversion is significantly lower than biomass and infrastructure requirements are not met by average facilities.</p> <p>Regulatory framework adapted to the biodegesters implementation.</p> <p>Long-term credit requirements do to capital intensive equipment.</p>				

Sector:	AFOLU			
Subsector:	Livestock			
Title				Reductions 2030 MtCO₂e
Rolling or other mechanical work to replace burning grassland and savannah	Unconditional		Additional	
	-		-	
Description	Status:		Under construction/ development	
Estimation of the replacement effect of burning grassland and savannah by rolling or other mechanical work		○ Needs more efforts		
Proposed mitigation action by this Project.				
Funding requirements		Source of funding		
Undisclosed		Private		
Key metrics:	TBD			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	Unlikely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x	x		x	
Why does it need more efforts?				
Technical skills generation.				
Deep cultural change.				

Sector:	AFOLU			
Subsector:	Livestock			
Title				Reductions 2030 MtCO₂e
Silvopastoral Systems	Unconditional		Additional	
	-		-	
Description	Status:		Under construction/ development	
Forestry and livestock integrated management system. Proposed mitigation action by this Project.	○ Needs more efforts			
Funding requirements	Source of funding			
Undisclosed	Private			
Key metrics:	a) Ratio of calves to forested area (T/ha).			
Target value	Current value	Stakeholders' likelihood assessment		
N/A	N/A	Likely		
Barriers' relative strength				
Economic	Technical	Financial	Political and cultural	Legal and institutional
x	x	x	x	
Why does it need more efforts?				
Development of machinery, tools and technical materials.				
More professional human resources who can manage the system.				
Sources of long-term credit.				
Deep cultural change.				