

# Cold Chains as a Health Resilience Imperative:

## Key message

-  Cold chains are lifelines in the face of climate change, food insecurity, and public health threats.
  -  They preserve vaccine potency, ensure food safety, and support emergency response.
  -  Invest in solar-powered refrigeration and low-impact technologies to reduce emissions.
  -  Support country-led innovations and private-sector partnerships tailored to local needs.
  -  Strengthen policy frameworks and unlock financing to scale equitable cold chain systems.
  -  Cold chains are about equity, and survival — a strategic imperative for resilient communities.
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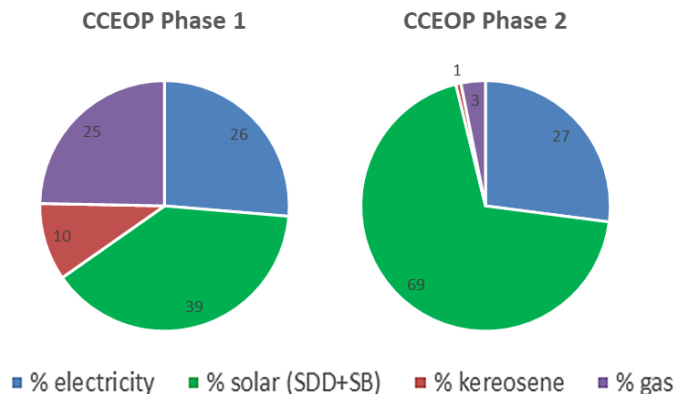
# Reducing Immunization Cold Chain Carbon Footprint

Gavi and UNICEF are promoting green procurement standards to decarbonize the immunization supply chain.

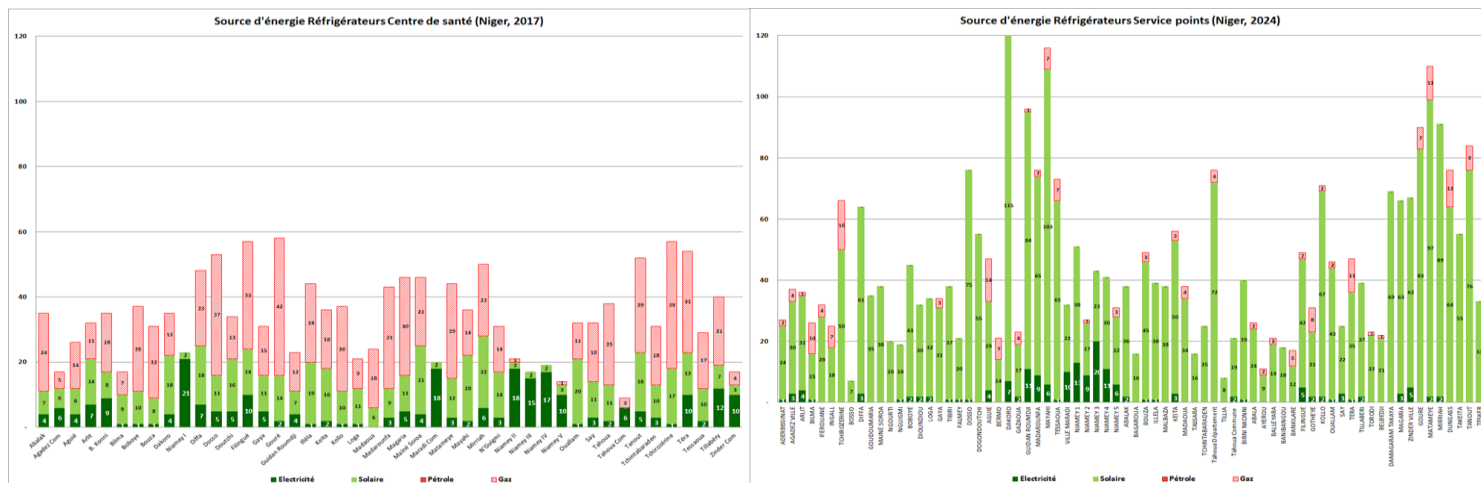
Increased deployment of solar direct drive (SDD) refrigerators contributes to reducing carbon footprint, electricity consumption and fuel cost of cold chain equipment.

Smart health facilities now integrate solar electrification and digital monitoring, reducing both operational costs and environmental impact.

Energy source distribution for service facilities with functional CCE



CCEOP transformation of CC infrastructure – Niger



## CCEOP 1: 2017

- 1105 service points (SP)
- 850 SP with functional CCE
- 51% CCE functional
- 32% CCE solar
- 52% of CCE gas absorption



## CCEOP 2: 2023

- 3770 service points (3.4 times increase)
- 2412 SP with functional CCE
- 89% CCE functional
- 90% CCE solar.
- 6% CCE gas absorption

# Improve Access to Quality Vaccines and Reduced Wastage



Gavi CCEOP deployed >40,000 units of WHO-prequalified CC equipment to extend immunization services to last-mile health facilities.

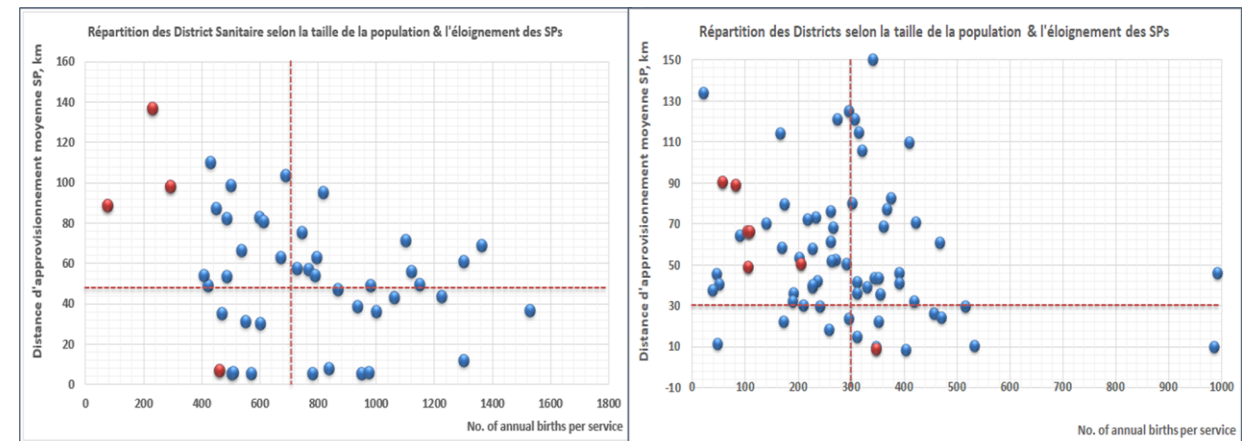


Improving cold chain technology and temperature monitoring systems helps reduce closed vial vaccine wastage.



Increased number of service-delivery facilities improved people's access to vaccination and workload of health workers.

## CCEOP transformation of CC infrastructure – Niger



### CCEOP 1: 2017

- 1105 service Points (SP)
- 750 annual births per SP



### CCEOP 2: 2023

- 3770 service points (3.4 times increase)
- 295 Annual births per SP