FRANCE

With nuclear energy as its primary source of electricity, France has more limited room to grow its renewable energy sector. As a result, even under the enhanced policy scenario, private investment in clean energy in France is projected to rise a modest 50 percent. Under current and Copenhagen policies, clean energy investment in France is projected to remain stable over the decade. Any nuclear capacity that retires will likely be replaced with more nuclear, and some coal capacity will need to be replaced over the next 10 years, leaving some room for growth of renewables. Of the $6.3 billion asset financing of renewables in France forecast for 2020 under the enhanced clean energy scenario, $5 billion will be spent on wind technologies. The third-largest wind resource in Europe after Germany and the United Kingdom, France plans to increase its wind capacity to meet its commitment under the EU's renewables target.

In the enhanced policy scenario, the cumulative investment potential in France from 2010 to 2020 is projected as $57 billion, which would leverage installation of 29 GW of renewable energy generating capacity.

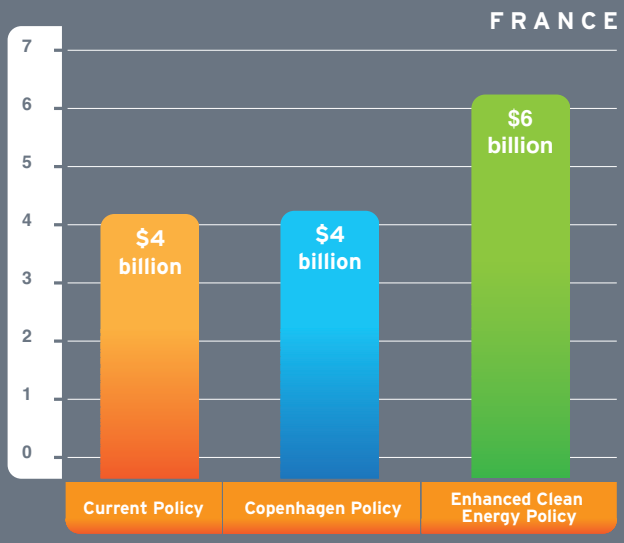
France has many of the pieces in place to foster a strong renewable energy sector. The country had $1.8 billion in clean energy investment in 2009 and has posted an average 98 percent growth rate in this area over the past five years. France has 3.4 GW in installed wind capacity and significant potential as a major photovoltaic (PV) power producer.

The government has put in place a requirement to source 10 percent of electricity from renewables by the end of 2010 and has signed on to the EU's cap-and-trade program. It has also adopted the EU's Copenhagen commitment to reduce its emissions by up to 30 percent from 1990 levels. The country recently joined the UK and Germany in saying it would live up to its Copenhagen pledge regardless of what other countries decide to do.

Despite some successes to date, France has not moved as rapidly to embrace renewable energy as it might have, due in part to policy inconsistency. Its tariffs for building integrated PV (BIPV) are among the highest in Europe, for instance, but frequent changes to the legislative framework and rampant bureaucracy create significant obstacles to the industry's growth. Removing these would not only help build new renewable capacity but could also foster a technology development center in France that could attract substantial international venture capital attention. Wind development suffers from an excess of administrative hurdles.

France could also address its centralized electricity system, which has made it difficult for independent players to add new clean capacity. Électricité de France (EDF) is responsible for connecting projects to the grid and political delays regularly leave project backers and developers alike on hold. Today, several gigawatts of PV projects alone are awaiting connection approvals. To expand capacity rapidly, France needs to address its centralized power system or develop new interconnection processes. Unless these bottlenecks are addressed, all the government's tariffs and incentives for renewable will be for naught.

FIGURE 31. INVESTMENT IN RENEWABLE ENERGY ASSETS, 2020 (BILLIONS OF $)



FINANCE AND INVESTMENT (2009)*	
Total Investment	$1.8 billion
G-20 Investment Rank	12
Percentage of G-20 Total	1.6%
5-Year Growth Rate	97.9%

INSTALLED CLEAN ENERGY (2009)	
Total Renewable Energy Capacity	9.4 GW
Total Power Capacity	8.1%
Percentage of G-20 Total	3.5%
5-Year Growth Rate	31.3%
Key Renewable Energy Sectors	
Wind	3,400 MW
Biomass	467 MW
Solar PV	346 MW

NATIONAL CLEAN ENERGY POLICIES	
Carbon Cap	
Carbon Market	✓
Renewable Energy Standard	✓
Clean Energy Tax Incentives	✓
Auto Efficiency Standards	
Feed-in Tariffs	✓
Government Procurement	
Green Bonds	

KEY CLEAN ENERGY TARGETS	
Renewable Energy	10% of total energy consumption by 2010
Efficiency	38% decrease in energy consumption by 2020

KEY INVESTMENT INCENTIVES	
Wind, Solar	Feed-in tariffs
RE Equipment	Tax credit for RE equipment used for residential power

*Includes investments in venture capital and public markets, and asset finance for all clean energy technologies including biofuels and energy efficiency.