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Energy subsidies at times of economic crisis:

A comparative study and scenario analysis of Italy and Spain

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Abstract From 2005-2012, Spain and Italy saw significant investment in renewable energy, most notably in onshore wind and solar, driven by generous subsidies, the expectation of rising carbon prices and falling renewables (especially solar panel) costs. As a result of the Global Financial Crisis, both countries were faced with massive fiscal deficits and were forced to curtail their renewable support schemes, although these efforts took several years to take effect after the onset of the initial crisis. Ironically, both Spain and Italy incurred the lion's share of their liability for renewables support after the onset of the crisis particularly because of the rapid drop in costs of solar PV panels, while subsidy levels remained high. In spite of changes to their support regimes, Italy is likely to meet its 2020 climate and renewable targets, whereas Spain is unlikely to meet its 2020 renewables target based on current trajectories. Following a comparative historical survey of the two large EU member states, we present a scenario analysis that contrasts alternative futures of 2030 where renewable support remain at current levels (essentially zero) or is revived and where carbon prices stay at current low levels (€5/t CO_2) or rises to levels needed to accomplish the proposed 40% EU 2030 reduction target. We find that, by 2030, in large parts of Spain, solar PV will be cost-competitive even under low-carbon price and low renewable support regimes, whereas concentrated solar power (CSP) and onshore wind, will require at least either a sustained renewable support regime or a high carbon price to become cost competitive. In Italy, solar PV becomes cost competitive in the low-carbon, low-renewable support scenario except when fossil fuel prices are unusually low. By 2030, there would be large-scale penetration of onshore wind and geothermal in Italy if there is either a high-carbon price or a high renewable support regime or both. In general, if the current levels of carbon price were to exist post-2020, both Italy and Spain would find it rather difficult to increase the

penetration of renewables in their electricity mix. A high subsidy world, on the other hand, would be result in the most favorable outcome, particularly for Spain, although it may incur additional costs in comparison to a high carbon price world.

Keywords Renewable energy; Electricity; Scenarios; Subsidies; EU energy and climate policy, Spain; Italy

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