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The cost of del sol?

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For some years Spain has been Europe's most dynamic project finance market for renewable energy thanks to strong incentives for developers that have seen wind farms spring up all around the country. However, with margins on wind power deals hitting rock bottom in 2006, the explosion last year of the country's solar power market has given project finance banks a welcome means of diversifying their portfolios.

Pricing on recent solar power deals has mainly been in the 100bp to 120bp over Euribor range. This is low enough to be attractive for sponsors, who are making double digit returns on these projects due to generous feed-in tariffs, and high enough to offer succour to lenders who are used to lending to wind projects at rates that are sub-100bp.

It is mostly because of the greater maturity of the wind energy market that margins are lower on wind farm projects than they are on solar farms. With fewer moving parts involved in gathering energy from the sun it is likely that pricing on wind and solar energy will eventually come into line. However, the peculiar nature of Spain's solar power market, with developers rushing to get photovoltaic (PV) plants completed before September 2008, after which subsidies are likely to be reduced, means that banks will have plenty of deals to feast on before then.

And the solar boom in Spain has been huge. In September 2007, the government announced that it was already 85% towards meeting its target of 400MW of PV capacity by 2010. This has triggered a 12-month deadline, set out under Royal Decree 661/2007, for PV energy developers to get their plants hooked onto the grid and thus securing the generous Eu0.44 per kW/h guaranteed under by decree. No one knows what the subsidy will be for plants that are hooked up after that date.

After the current burst of PV activity has passed, there will likely be a change in emphasis in the kind of deals that are getting closed, with greater emphasis placed on solar thermoelectric plants, which are already getting closed. PV is less efficient than thermoelectric, and so there is great uncertainty about the future of the sector after September 2008.

Going thermal

The most notable deals to close so far in 2008 include Abengoa's 50MW Solnova 3 solar thermoelectric plant at Sanlucar la Mayor in Andalusia, which closed in January, and Isolux Corsan's Eu1 billion 120MW Tuin Zonne portfolio of 30 photovoltaic projects spread across seven of Spain's regions.

Solnova 3 follows on from and is located at the same site as the 50MW Solnova 1 project that closed in December. Four more plants will eventually follow at the site, creating a 300MW solar thermoelectric complex. Abengoa is currently syndicating a combined debt of Eu462 for Solnova 1 and 3, with the same group of lead arrangers.

The Solnova and Isolux financings represent the two faces of Spain's project market for solar power: portfolio financings of smaller photovoltaic facilities, which converts solar energy directly into electricity, and larger solar thermoelectric plants, which harness solar energy for heat. Solar thermal stations use a variety of reflective technologies that work to concentrate solar radiation with the aim of heating a working fluid to spin a turbine, thus generating power.

Unlike PV plants, whose solar panel clusters are only suitable for generating smaller quantities of electricity, solar

thermoelectric power is far more suited for concentration in larger electricity producing stations. The technology is still comparatively new in Spain, having previously been used in sunny US states like California and Nevada, but it is getting established quickly.

Despite using relatively new technology – and comprising a smaller volume of new energy capacity than PV – solar thermoelectric projects have been present throughout Spain's current solar projects boom. The Cobra Sistemas y Redes – a subsidiary of ACS – closed the Eu311 ($473 million) Andasol 1 financing in 2006 to be followed in 2007 by the Eu253 million Andasol 2 financing. Last year also saw ACS close the Eu397.8 million Extresol project, a 50MW project in solar thermoelectric project in Spain's Extremadura region. Though smaller than than the others, a Eu61 million solar thermal project in Sevilla, to be built by Aberner Energia, closed last July.

The mandated lead arrangers on the Solnova debt are Caja Madrid, Calyon, Natixis, Santander and SG. The debt for Solnova 1 comprises a 22-year Eu234 million term loan and a Eu7.6 million guarantee facility. Solnova 3 has a Eu228 million term loan, with the same tenor, and a Eu8 million guarantee facility. Both deals also have a three-year VAT facility of Eu25 million. Margins range between 105bp and 110bp over Euribor, while the average cover ratios are 1.3x.

While deals like the Solnova and Andasol ones are what the future holds for Spanish solar project financings, the Isolux PV portfolio financing, though highly unusual for its large size, is more representative of the kind of the kind of solar deals that are most prevalent now. Uncertainty over the future for PV after September 2008 has added urgency to proceedings. With a portfolio as large as Isolux's – 30 units in total – there is a risk that some of these will not be ready before the September cut-off, so Isolux has had to provide strong risk guarantees.

The financing of Isolux's Tuin Zonne portfolio was lead arranged by 12 banks – BBVA, Banesto, Banco Popular, Banco Espiritu de Santo, La Caixa, CaixaBI, Caja Madrid, Depfa, ECO, Natixis, KBC and SG – and includes Eu862 million of debt that is split into a Eu700 million 20-year term loan, a Eu112 million VAT facility and a Eu50 million guarantee facility. Pricing on the debt starts out at 75bp during the construction phase, and then varies between 110bp and 130bp according to cover ratios during the operation phase. The average debt service cover ratio is 1.25x. Syndication will launch in April.

Isolux stands out as the largest deal, but during 2007 there were dozens of financings of PV deals ranging in size from tiny ones like the Eu5 million Agrufoto Moraleja PV project, generating just 0.5MW of electricity, to the Eu250 million debt for Aldesa's 38MW project in Andalusia, arranged by Banesto and Santander. Quite typical of these was the Eu76.3 million Laxtron Energias Olmedilla project that reached financial close in December, a 10MW photovoltaic plant under construction in the region of Cuenca, including Eu68.7 million of debt. Also of note was the Eu207.5 million Solaris project bond, closed by Deutsche Bank last summer, which was the first project bond for a solar project.

Royal Decrees

Many of the projects completed prior to September 2007 have included clusters of smaller assets of 100kW because of a loophole in the tariff regime in place before RD661/2007 was brought in last May, which offered a substantially higher feed-in tariff for projects of this size. Under that regime, laid out in Royal Decree 436/2004, energy from PV plants of under 100kW built by September 2007 received a tariff of 575% what consumers pay, compared to 300% for PV plants above 100kW.

That loophole was closed with RD661/2007, but the attractive tariff of Eu0.44 per kW/h was designed with the intention of ensuring that PV developers receive an 8% internal rate of return. However, RD661/2007 will itself now be replaced this year because of the PV sector hitting its megawattage target for so early. Under the terms of the decree, when 85% of the target for any sector is reached then a new regime needs to be negotiated to take effect after a fixed amount of time, which in the case of PV is one year. Two issues that will have to be resolved are the new tariff for projects completed after September and what the new target level of output should be. The figure of 1,200MW has been mooted, but some involved in the industry are arguing that even this is to low, with the figure for connected capacity likely to reach 900MW by September. This would be within a whisker of the 960MW required before the regime would have to be renegotiated once again if 1,200MW were set as the new target.

Much will depend on the Spanish general elections, which will be held on March 9. The ruling Socialist Party remains committed to PV energy, but former Endesa president Manuel Pizarro, who is in the frame to become finance minister if the conservative Partido Popular wins the election, has attacked the government on the campaign trail over its subsidies for renewable energy sources.

Uncertainty will remain until the spring, but with PV bankers regard solar thermal power as the better project finance bank for the future. The tariff regime in place makes 50MW the most beneficial size for these financings, which at a cost of approximately Eu250 million is a good size for project finance deals. The longer construction time for solar thermoelectric plants – typically two years, compared with one year for PV – means that it will take longer to get the target 500MW hooked onto the grid than the equivalent PV target, but conditions are in place for steady growth.

Much new capacity will come in the form of further expansion of existing sites in Andalusia and Extremedura in southwest Spain, most notably Solnova. However, new ones will also spring up, with at least one large project planned for Castilla-La Mancha.