

**Table2-1: Sourcing Finance – Determining the costs.**

Challenges	Best Practice Solutions
<p><b>Level and Complexity of Costing:</b></p> <ul style="list-style-type: none"> <li>• Uncertainties around pricing of FCBs, HRSs, and H<sub>2</sub> fuel</li> <li>• Demand for FCBs is still higher than supply, so the industry competition is immature</li> <li>• Inexperience with costing CAPEX and calculating revenue in short term (demonstration) projects</li> <li>• Inexperience and complexities of costing OPEX</li> <li>• Costing uncertainty is compounded by multiple options for H<sub>2</sub> fuel supply</li> </ul> <p><b>Lack of Information:</b></p> <ul style="list-style-type: none"> <li>• Not enough general experience to be confident about bus performance in operations</li> <li>• Lack of financial models</li> </ul>	<ul style="list-style-type: none"> <li>• Build a draft but comprehensive business case from day one, then refine it as your project progresses, thereby improving accuracy. The business case must include the refuelling infrastructure if this is not covered by another responsible body</li> <li>• Learn from other cities with experience; some will be willing to provide sample specification information and provide figures from their operations</li> </ul> <p><b>CAPEX:</b></p> <ul style="list-style-type: none"> <li>• Consider procuring jointly with other sites to get better prices through higher volume (see Section 3), for the FCBs and for the HRS and H<sub>2</sub> fuel supply or alternatively for 'hydrogen as a service'. This can work, provided the sites have similar requirements and specifications, and similar regulatory structures</li> <li>• Consider including preventative maintenance costs in the capital costs of the buses to reduce the operating costs, which are a key consideration for any operator</li> </ul> <p><b>OPEX:</b></p> <ul style="list-style-type: none"> <li>• H<sub>2</sub> pricing can be difficult. A lower price can be achieved if a minimum purchase quantity is guaranteed to the supplier ('take or pay') and the contract is lengthy and offers break clauses (ability to stop the contract at defined points)</li> <li>• Seek to obtain renewable ('Green') H<sub>2</sub>, but be aware that sources currently can be limited (for information on H<sub>2</sub> supply and on the EU definition on Green H<sub>2</sub> see Table 2-7 and Section 3 on Procurement)</li> <li>• Indicative bus performance in terms of efficiency and maintenance costs are available through the JIVE projects</li> </ul> <p><b>TCO</b></p> <ul style="list-style-type: none"> <li>• Be thorough with TCO, including 'beyond project' costs after the co-funded phase. This includes being clear which technology you are looking to compete with from the outset (diesel/diesel hybrid/battery electric). In the past PTOs have looked for parity with diesel, now however BEBs are the competitor in terms zero emission propulsion.</li> <li>• Be sure to include the requirements of maintenance, training and certification for a new technology</li> <li>• Be sure to include the residual value of the buses and the HRS</li> </ul>