

**Sub -Part D – System Support Plan****a. General**

The OIW/Skoda Team is planning to completely support the customer after the delivery of the vehicle. Following is our plan and approach/strategy on supporting the delivered vehicle:

b. On Site Support During Delivery

On-going Logistical Support, spare parts, technical service, upgrades in software and vehicle downtime are key factors in analyzing the total cost of operations and ownership for a vehicle. OIW and Skoda are committed to local support of the prototype streetcar and all follow on vehicles.

All major components, Skoda Electrical motors and drives, and other critical vehicle components will be stocked locally. In addition, factory trained technicians will reside at OIW and be available for service. Should it be necessary for direct Skoda Electric factory support, a technician will travel from the Czech Republic within 48 hours of issuance of a travel visa.

With local stocking of spare parts and resident factory trained technicians the funds normally used to purchase spares can be used to build additional cars for the City of Portland.

c. Testing

A complete and very detailed testing program is described in sub-part F. For support and participation to testing please use the information provided on that section.

After completing the full testing program (described in sub-part F) we will provide on site assistance to the customer during the vehicle Operational testing. The support provided will be in accordance with the city requests and will include OIW personnel and Skoda personnel (when necessary). In addition, if the customer requires the presence of the suppliers to the Operation testing program we will ask the vehicle components suppliers to participate together with us and the customer.

d. Warranty

OIW is planning to provide the typical (full) warranty to the vehicle delivered to the customer. The warranty will cover all the major components, with support from the suppliers, but with OIW as the prime contact, so the streetcar is handled as a unit. OIW will transfer to the customer any warranty offered by the component suppliers that is longer than the typical one listed below. A list of all extended or superior warranty's that are to be passed on to the customer from component suppliers shall be submitted during design reviews.





Warranty Period and Conditions

- OIW will warrant materials free of defects and full vehicle (correct functionality of the vehicle) and its equipment in accordance with sub-part B and the technical specification.
- The warranty period is either 24 months from acceptance or 15,000 miles whichever one occurs first, but no more than 36 months from delivery. Fulfillment of at least one, regardless which of the above conditions will terminate the warranty period.
- Five years after acceptance or conditional acceptance for each cab shell including the main structural components (underbody, front, rear, side walls, roofs), brackets, exterior panels, truck frame and painting.
- Three years after delivery for special tools and test equipment (if test equipment will be purchased from or with OIW's involvement)
- The warranty does not cover malfunctions, faults, damages or consequent damages caused by:
 - improper storage
 - improper, insufficient or no maintenance
 - breaching of operating conditions and procedures described by manuals or training
 - using the equipment other than described in manuals or for other reasons
 - unauthorized modification or re-design of the equipment
 - unauthorized use of the diagnostic software to change preset constants
 - damage caused by force majeure
- The warranty does not cover consumption of material which is subject to typical wear and tear during normal operation.
- The warranty ends if the whole vehicle is damaged by crucial/total accident; since majority of the parts can be impacted/damaged and there is no practical way to define the level of damage on the "apparently" non-damaged parts.
- The extended warranty could be provided if requested by the customer. The extended warranty will be provided for an additional cost to be determined at a later date. If extended warranty is offered by a component supplier for a cost, OIW will pass the offer terms to the customer.

e. Manuals

In accordance with the RFP requirement all technical documentation and electrical schemes as well as operating/maintenance manuals will be submitted together with part lists.





Documents describing the maintenance, failure detection, repair, heavy maintenance, test and understanding about the vehicle will be included.

The documentation prepared for the customer will include:

- Body shell drawings
- Drawings of bogie and related units
- Vehicle design and assembly documents and documentation of components
- Vehicle
- Electrical equipment
- Hydraulic system
- HVAC system
- Vehicle cable diagrams
- Vehicle electric diagrams
- Equipment documents
- Quality documents
- Vehicle test procedures
- Maintenance documents for individual blocks
- Spare parts lists
- Data sheets of separate elements used in vehicle
- Driver's manual

f. Training

OIW intends to conduct on-site classroom instruction using draft information within four weeks of the delivery of the pilot unit. Hands on instruction will be of a leader/ follower nature through performance testing leading to acceptance of the car set. The training material will be corrected from this effort, and two sets of formal classes will be offered with considerable hands on training. The classes will cover at a minimum the following.

- 1) Basic safety
- 2) Operational overview
- 3) Operation for the mechanic
- 4) Use of the diagnostics system
- 5) Fault identification
- 6) General Maintenance
- 7) Trouble shooting
- 8) Parts manual review

Operator training will be conducted informally during the onsite testing of the unit, using draft data, and the car. Formal training will follow performance testing, and will continue as the car goes through simulated revenue testing. Every effort is being made to keep these cars as close to the current fleet in operation in Portland. OIW suggests that limited selected key members, (potential trainers) participate in the production of the car at agreed to times, to establish base knowledge as the car is constructed.



**g. Spare Parts Provisioning**

OIW is not recommending that the City procure any spare parts for the prototype vehicle as OIW will provide Portland with easy access to supplies, spare parts and technical support for the streetcar. First and foremost, spare parts and supplies will be conveniently located at nearby OIW facilities. Second, the OIW/Skoda team will have factory trained technicians at OIW to give technical support to the city as needed. These technicians will be able to meet the cities surge capacity needs, and save the city money in providing its own additional technicians. OIW will also give Portland a local point of contact who will manage the streetcar supplies, spare parts and technical support. With OIW's plan, Portland will have cost effective and efficient access to spare parts, supplies and technical support on an as-needed basis in as little as 72 hours.

h. Component Costs

Listing of the System Support component costs and a reference table of spare parts is attached to Form 7 in the Payment and Price Proposal.

