AUTOMOTIVE SKILLS DEVELOPMENT COUNCIL (ASDC)

Sunday, 17th November 2019
at Indira Gandhi Pratishthan, Lucknow
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1. Purpose

ASDC PURPOSE

CONSEQUENT ADDITIONAL JOBS

ECONOMIC ACTIVITY

CAPITAL CREATION

HIGHER VALUE ADDITION

↑ Complete commitment of the Industry (SIAM, ACMA and FADA) ↓

↑ Ensuring credibility, reliability and robustness of the Skill Assessment process. ↓

CONTINUALLY DEVELOP AND UPGRADE AUTOMOTIVE SKILLS

- For higher value additions
- Through making Skills aspirational and integrated with academic pathways
- By honouring and celebrating the Skilling achievements
2. Roles

ASDC’s Role

- Standardized 188 job roles based on industry requirement
- Content & curriculum developed based on QP/NOS
- Special Focus on developing content for online learning

Standards (QPs & Content)

- Development of training delivery skills of the trainers
- Improve the overall quality of training and assessment

Training of Trainer and Assessor

- Affiliated TP/TC can commence NSQF aligned training
- Facilitate collaboration on various government scheme & projects

Affiliation/Industry Partner

- NSQF aligned assessment by ASDC certified assessors
- GoI recognized certificate, enhancing credibility of the training program

Assessment & Certification

- Organize placement drive to facilitate placement of certified candidates
- Industry to facilitate placement and apprenticeship training opportunities through B2B forums & workshops

WorldSkills & IndiaSkills

- Supporting 4 skills at the WorldSkills and IndiaSkills competitions
- Won a bronze medal in Prototype Modelling at WorldSkills 2017
- Won 3 Medallion of Excellence at WorldSkills 2019
2. **Role:** Assessment & Certification process

**Assess**
- **Proctored** assessments by TCS iON
- Covers 2 *stages of test*:
  - Part-1: **Test of Knowledge**
  - Part-2: **Test of Application**
- **Candidate Anonymity** – Elimination of personal bias
- **Digitized Review** – On TCS iON Digital Marking Platform
- **Objective Marking** – Through objective Rubrics and certified markers

**Mark**

**Certify**
- **Performance Scorecard** – Ability wise scores provided
- **Skill Portfolio** – Access to ‘practical performance’
- **Verifiable Certificate** – Accessible through Digital Platform
2. CERTIFICATION: TRANSPARENT, RIGOROUS & EVIDENCE-BASED
2. Placement: Job Listing Platform

Candidate view of the Listed Jobs

Target launch date end-2019
3. Challenges in Skilling and its role in developing any industrial sector

- Insufficient Scale and Restricted Capability of Training Providers
- Mobilization of Trainees as skill is not inspirational
- Employer’s not buy-in as trainees are not job ready
- Scalability difficult due to poor support from stakeholders
- Skills Mismatch due to poor linkage of industry and academics
- No focus on Non-Technical Skills
4. Skill requirements in the EV sector

Entirely New Skills
- Battery pack assembly
- Manufacturing of charging infrastructure
- Servicing of batteries and motors (imported)

Re-skilling of existing jobs
- Testing and validation of EVs
- Charging Infrastructure Ops Management
- Mechanical structure assembly
- Thermal management: cooling of static devices, power electronics etc.

New Skills from other sectors
- High voltage handling: Expertise from Transmission and distribution (T&D)
- Developing Apps for GPS, billing etc., control, analytics, real time communication: Expertise from IT/Software
- Expertise from Power Electronics

Obsolete skills
- No requirement of emission expertise
- Reduction of skill requirement in ICE engines
- Petrol/gas station attendants to be replaced by charging/swapping station operators

Key Skills
5. Training Needs

1. **EV diagnostics**: EVs will have many new electrical components, the troubleshooting, diagnostics its understanding becomes very to figure out where the problem is in the vehicle.

2. **Safety Precautions**: Batteries can pose a chemical and an electrical hazard to workers if not handled properly and training needs to be provided to maintain utmost caution and safety.

3. **Work Methodologies**: A training needs to be provided which covers best work methodologies for a safe working environment.

4. **Battery Handling**: A training needs to be provided for Effective battery management system (BMS) and manufacture of EV batteries with robust design for manufacture (DFM).

5. **Vehicle Integration**: These trainings should broadly cover two different domains- the grid technical operation and the electricity markets’ domain to expand the EV market by integrating it in the electric power systems.

6. **Battery Swapping**: Training needs to be provided for attendants at the charging stations to be able to efficiently replace the discharged battery from the vehicle with a charged one.

7. **Service and Maintenance**: Service technicians and mechanics who inspect, maintain, diagnose and repair EV on working with computerized, electronic and traditional tools.
6. Occupational Map

- Occupational Map was developed by PwC and ASDC, then inputs were taken from Maruti India, Honda Cars India, Tata Motors, Sansera Engineering Pvt. Ltd., Mahindra & Mahindra, Ashok Leyland, etc.

- Top priority job roles on Electric Vehicle

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<th>Area</th>
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<td>Charging Station</td>
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<td>Fast Charging</td>
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<tr>
<td>2</td>
<td>Manufacturing</td>
<td>Battery pack assembly operator</td>
<td>Battery Pack Assembly</td>
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<td>3</td>
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<td>4</td>
<td></td>
<td>Diagnostic and Troubleshooting Operator</td>
<td>Vehicle Assembly</td>
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<td>5</td>
<td>Service - Vehicle</td>
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- ASDC is in process of developing QP/NOS and would most likely be completed in April 2019 for specific job roles like Automotive Service Technician, Charging Station, etc.

- ASDC has formed Expert Group with the support from ARAI, Maruti India, Honda Cars India, Mahindra Electric, etc.
7. Focus Areas

A. 2 and 3 Wheeler Electric Vehicles

GENERAL

• Currently, a 12% GST applies on EVs, as against a 28%-plus GST on petrol and diesel cars and hybrid vehicles.
• 11,000 electric rickshaws are sold in India every month and sales are expected to increase by around 9% by 2021.
• M&M tied up with Three Wheels United to promote Treo range in Bangalore and Hyderabad with an aim to sell another 10,000 units.
• SmartE, an Uber-style app using 800-plus e-rickshaws around New Delhi.
• The potential market for e-rickshaws could be sales of 20 million vehicles a year.
• Hero Electric plans to sell 40,000 electric two-wheelers during the current financial year. Hoping to double its volume every year and reach the 100,000 mark by fiscal 2020 or 2021.
• SmartE plans to deploy a total of 10,000 Mahindra electric three-wheelers across India by 2020.
7. Focus Areas

B. Public Transportation (e-buses)

• Out of total budgetary support under FAMEII, about 86 percent of fund has been allocated for Demand Incentive so as to create demand for xEVs in the country

• The incentives based on demand are available as highlighted below:
  o **Electric two wheelers**: 10 lakh registered electric two-wheelers of Rs 20,000 each.
  o **E-rickshaws**: 5 lakh e-rickshaws of Rs 50,000 each.
  o **Electric four wheelers**: Rs 1.5 lakh each to 35,000 electric four-wheelers with an ex-factory price of up to Rs 15 lakh.
  o **Hybrid four wheelers**: Rs 13,000 each to 20,000 strong hybrid four-wheelers with ex-factory price of up to Rs 15 lakh.
  o **e-buses**: support to 7,090 e-buses with an incentive of up to Rs 50 lakh each having an ex-factory price of up to Rs 2 crore.
8. ASDC: experience in three Wheeler Electric Vehicle

- ASDC has QP for Auto E-Rickshaw Driver/ Assistant Service Technician (ASC/Q9719) which covers 3 wheeler domain
- Currently we are in process of revising the QPs with support of industry
- Total trained candidates under PMKVY scheme till date (2019-2020) – 350+ candidates
9. ASDC: experience with State Transport Undertaking (STU)

- ASDC has signed MOU with DTC for training of RPL- 4 (Best in Class)
- Under RPL 4 already trained drivers are been certified under job role Commercial Vehicle Driver (ASC/Q9703)
- Till now 500+ contractual driver trained
10. How GIZ can collaborate

• Dr. K C Vora (Deputy Director, ARAI) is Chairing the ASDC Expert Group for Electric Vehicles.
• As per upcoming technology in the industry we are working with ARAI, Mahindra Electric, Tata Motors, Maruti, etc for QP development.

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<td>Sales</td>
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<td>Sales Manager</td>
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<td>Driver’s Training</td>
<td>Training</td>
<td>Driver-cum-Electrician/Telematics</td>
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• GIZ could join in the effort and provide their expertise towards developing these QP. Also support creation of curriculum and in conduction of ToT and ToA:
  a. Driving
  b. Service
  c. Battery Manufacturing, Design and Servicing
  d. Product Design and Test Technician
  e. Sales
THANK YOU