

**RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA,
M.P., INDIA**

Invites

Expression of Interest (EOI)

for

**Identification of Original Equipment Manufacturer (OEM)/
Equipment Provider to setup Centre of Excellence in the Field of
Automotive, Electric and Hybrid Mobility for imparting high-end skill
training, Industrial Consultancy & Research works**



Rajiv Gandhi Proudhyogiki Vishwavidyalaya

(State Technological University of M.P.)

Gandhi Nagar, Airport Road, Bhopal,

Madhya Pradesh, India – 462033

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Expression of Interest (EOI) for identification of original equipment manufacturer (OEM)/ Equipment Provider to setup Centre of Excellence in the Field of Automotive, Electric and Hybrid Mobility for imparting high-end skill training, Industrial Consultancy & Research Works

REF.No. RGPV/SOEEM/EOI/2020

Date: 14/10/2020

- Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal (RGPV) invites proposals from eligible firms for identification of OEM/ Equipment Providers for setting up A Centre of Excellence for knowledge creation & Development, imparting high-end skill training, Industrial Consultancy, Research activities in the field of Automotive Electric and Hybrid Mobility.

1. Participating firm/OEM must fulfill the following pre-requisites:

S. No	Pre-Qualification Criteria
1	OEM should be a manufacturer, designer and developer of didactical equipment. The OEM should be a company recognized for providing educational technological products in the technology areas listed in the technical Section. All areas should be covered by products of the same OEM as manufacturer. They may execute it through their Authorized System Integrators or channel partners.
2	The OEM /Authorized System Integrator or channel partner should have been in existence for minimum 5 years in similar business. The OEM should also have National & International references in the said area.
3	The OEM or their Authorized System Integrator or channel partner should not have been blacklisted by any Government/ Department/ Body.

2. The format for EOI submission may be downloaded free of cost from the website of Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal -www.rgpv.ac.in. and it should be submitted to the Office of the Registrar, Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal online submission (email: registrarrgpv@gmail.com) and in hard copy (3 sets) up to 15:00 hrs. of 02/11/2020. Each page of the proposal should be signed by the competent authority of the applicant.
3. All amendments, time extension, clarifications etc. will be uploaded on the website only and will not be published in newspapers. The interested parties should regularly visit the website to keep themselves updated.

Key dates:

Sl.	Description	Important Information / Timing
1.	Date of Invitation for EOI	15/10/2020, 15:30 Hrs
2.	Due date & time for submission of EOI	02/11/2020, 15:00 Hrs
3.	Date of opening of response to EOI	03/11/2020, 13:00 Hrs

Registrar

Rajiv Gandhi Proudhyogiki Vishwavidyalaya, Bhopal

**EXPRESSION OF INTEREST (EOI)
FOR IDENTIFICATION OF ORIGINAL EQUIPMENT
MANUFACTURER (OEM)/ EQUIPMENT PROVIDER TO SETUP
CENTRE OF EXCELLENCE IN THE FIELD OF AUTOMOTIVE, ELECTRIC
AND HYBRID MOBILITY FOR IMPARTING HIGH-END SKILL
TRAINING, INDUSTRIAL CONSULTANCY & RESEARCH WORKS**

Information about EOI

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Section 1

Scope

Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal is inviting an expression of interest for identification of OEM/ equipment provider to setup a State-of-the-Art Laboratory that focuses on upcoming technologies related to

- Automotive Electric and Hybrid Mobility

It is a turnkey project where the OEM will be responsible for the supply of the technological product / lab hardware and software, commissioning of it and a train-the-trainer phase enabling the institute faculty to operate the hardware and software to the highest standards of modern teaching and skill-building. It must be state-of-the-art and industry relevant and should cater to the current and future requirements of the industries.

The services proposed in the Labs can be provided directly by OEM or through their authorized partners.

The Laboratory Setup should be an interdisciplinary, industry-oriented focused on developing skill excellence in the field of Automotive Electric and Hybrid Mobility. Through the training and implementation of industry-relevant technology and processes, the Lab should facilitate a multi-disciplinary experimental setup with a common interconnected learning environment across the involved faculties.

The Lab should meet the demands of the industries' ever-changing processes and help build skills around collaboration and innovation. The Lab should leverage the Technology Partner's capability to draw upon the project execution expertise and experience in training Labs from areas of automotive.

The lab should also cater the Industrial needs of skill development and consultancy in the areas of engineering, product design & development and advanced manufacturing technologies.

The Lab should have focus bridging the skill gap of students towards today's and future industry needs and impart state-of-the-art industry-oriented training on Automotive Electric and Hybrid Mobility with Hardware & Software to generate productive workforce to sustain in National & International markets.

Section 2

A. Requirements of the Lab Setup

- The Lab Setup should be aimed at Industry connected skill development programs.
- All the Hardware should fit to meet highest global educational standards.
- Software should be enabled to give didactical and methodological help to students and trainers.
- All the equipment in the Lab setup shall be provided by the same OEM to enable a mutual learning environment for seamless operations and interdisciplinary approaches.
- The Lab shall provide national and international recognition of the taught skills through independent domain third party international Certification providers.
- The Lab equipment should be able to easily integrate future technology topics in the relevant domain.
- The Lab should be designed and planned as per a modular concept and should be multi-disciplinary and interchangeable.
- The Courseware should be a solution/product developed by the OEM and it should be provided in English and Hindi. It should also have the option of availability on a cloud-based platform (e.g. COVID Scenario). The contents should be editable by the user (In this case RGPV).
- The Lab equipment should have a minimum warranty of 24 months.
- The Lab setup should have a major portion of Hardware in addition to Software and should not be only IT based simulation.
- The Lab equipments should have a common learning environment.

B. Eligibility

- OEM should have a Regional Office in India or should be represented by an Authorized System Integrator or channel partners.
- The OEM / Authorized System Integrator/ channel partner should have been in existence in similar business for at least 5 years.
- The OEM should have National & International presence demonstrated by the established lab references through documentary evidences.

- The OEM should be in the didactic domain, offering proprietary items in these labs designed and manufactured by them. Barring utilities such as computer, compressor, stabilizer. The primary equipment / software in the lab of must be a product owned by the OEM.
- The OEM will be responsible to bring in an Independent third-party International Certification Partner.
- The average annual turnover of the OEM for the last three audited financial years FY 2016-17, FY 2017-18, FY 2018-19 should be of minimum Rupees 50 crore.

C. Eligibility of Certification Partner

- The Certification Partner should not be the same as the OEM and have international presence.
- The Certification Partner should be an independent body and it should not be product/brand-based certification.
- The Certification partner should be able to provide established projects references from at least 3 different countries to be submitted.
- Certification Partner should have a platform for enlisting the certified candidates giving their skill set national and international exposure

Section 3

Technical Scope

Concept

The target as part of this program is to encourage an OEM to design and equip a State-of-the-art Laboratory. The Lab is being setup to offer an interrelated high technology, modular, skilling facility and offer demand driven programs.

The Lab, to be designed by the OEM, is envisioned to be setup as a State of the Art Laboratory in which the OEM offers their best in class equipment/ tools/ machines/ simulators (commonly referred to as equipment) to be used for training purposes. The Labs will be located in an appropriate space allotted by Rajiv Gandhi Proudhyogiki Vishwavidyalaya, Bhopal. The infrastructure for the Lab will be made ready by Rajiv Gandhi Proudhyogiki Vishwavidyalaya, Bhopal as per the specifications given by the OEM.

Role of the OEM and Certification Partner (CP)

A. Role of the OEM

The role of the OEM shall include but not limit the following:

1. Identify and formulate training equipment proposal which will help to develop skills in futuristic/ disruptive technologies and associated skill sets required for industry ready.
2. To provide course content, course work, manuals, standard operating procedures and standards, disseminate the same with the overall intent of improving the skill sets of individuals.
3. To enable the client high-end skills to Students, unemployed individuals and employed individuals (looking to up skill/ re-skill themselves).
4. The OEM is responsible for the installation and the commissioning of the equipment.
5. To provide On-Site training to the faculty members and lab instructors.
6. To provide support for curriculum development for short term programs.

B. Role of the Certification Partner (CP)

It is a mandatory target that the courses executed in the Labs are eligible to be certified through a third-party international Certification body providing international industrial certification. The CP as an independent certification authority shall be industry related and acknowledged as an international authorization body. The Certification Partner shall be able:

1. To certify the Labs itself as an authorized Center with quality assurance processes in place.
2. To provide international certification to participants on basis of provided courses.
3. To provide an international registration platform where issued certificates can be verified.
4. To conduct periodical Audit of the Labs together with the OEM.
5. To provide certification of Master Trainers for this domain.
6. CP should be in capacity to shape Skill Oriented curriculum and learning solution when needed.

Section 4

Domain Information

Automotive Electric and Hybrid Mobility

The automotive industry is one of the most dynamic industries, always on the edge of new technologies and developments and almost endless opportunities. To enable students to succeed in this environment requires continuous learning and refinement of skills to keep up with the latest ideas from the manufacturers.

Electronic developments have been seen to initiate the biggest changes to modern vehicles, making them safer, less polluting and more efficient than ever before. But this also poses the biggest challenges for the education of the workforce needed. With the momentary huge shift from the classical automotive technologies towards Electric- and Hybrid cars, trucks and other vehicles the education and skilling needs are even again substantially increased; The industry is amid a technical revolution. Recognizing this it is imperative to educate, skill and develop the workforce of the future to cope with these technology shifts. But not only the workforce of the future is to be named, but as well the workforce of today which was skilled and trained based on the classical technologies. Re-Training, updating, new skilling in areas which are partially unknown to the existing experts is the need of the hour to keep them employed. And this not only necessary for the core-workforce but as well for drivers, maintenance staff, or even other more far related profession like for example first responders where the new technologies will have a major impact on their daily work handling accidents and accidental vehicles.

Section 5

Supply of labs/Items:

List of Minimum Topics

S. No	List of Minimum Topics to be included
1	<p>Automotive Electric and Hybrid Mobility: The Automotive Electric and Hybrid Mobility Lab should be equipped with advanced Computer aided didactically enhanced training systems. These solutions shall assist the students to understand Automotive engineering for hybrid and electric cars from the base technologies up to advanced technical solutions. The lab shall be run on an overall didactical learning environment (Teach-ware/ Lab-administration/ LMS). To enable the students to develop their skills the provided systems should mainly based on hardware and support the hands-on approach. The equipment and systems provided shall not be brand-related or brand-focused and shall enable an overall education for the students to be ready to work for different kinds of manufacturers, brands and employers.</p> <p>The Lab should cater to the following areas:</p> <ul style="list-style-type: none"> • Introduction to Hybrid and Electric Vehicles • Servicing work <ul style="list-style-type: none"> • Correct selection and testing of suitable instruments and testing equipment • Carrying out service work on HV systems • Checking charging device • Charging of high-voltage battery • Repair work <ul style="list-style-type: none"> • Measurement at potential equalization conductors • Disconnection and isolation of a HV system • Putting a HV system into initial operation • Measurement of insulation resistance • Measurement of the shielding • Measuring the temperature (traction battery, E-machine) • Diagnostics work <ul style="list-style-type: none"> • Fault finding on a HV system • Drive concepts • Electrical hazards • HV battery • Working with high-voltage vehicles • Safety concepts for high-voltage vehicles • Hybrid driving • Pure electric driving • Generator operation • Boosting • Regenerative braking and energy recovery • Operating principle for resolvers • Operating principle for interlock contacts • High speed - CAN bus

- Measurement of the CP signal of type 2 charge connection during active charging process
- How to handle damaged HV vehicles
- Diagnosis and Maintenance of a High Voltage Battery
- Replace high-voltage components
- Recognize repair needs and carry out repair options
 - Determine system operating states with the aid of the diagnostics systems, compare these to information in databases and evaluate results
 - Measure, check and evaluate signals at components and systems
 - Measure, test and evaluate electrical connections
 - Test high-voltage systems with diagnostics equipment, in particular perform measurements on isolation, equipotential bonding and voltage drops
 - Analyze and evaluate messages in data bus systems
 - Learn how battery cells are designed and function in the HV battery
 - Learn how temperature sensors are designed and function in the HV battery
 - Design and function of HV charging systems
 - Advantages and disadvantages of individual HV charging systems
 - Measuring voltage characteristics in HV batteries for different charging and discharging cycles
 - How sensors and actuators interact
 - Open-loop control processes in the motor vehicle
 - Closed-loop control processes in the motor vehicle
 - Differences between open- and closed-loop processes
 - Fundamentals of automotive Electrics and electronics
 - CAN bus
 - CAN FD in motor vehicles
 - Safe Handling of HV Systems
 - Battery Disconnect Unit in Hybrid and all Electric Vehicles
 - Electric drives in hybrid and electric vehicle
 - Interlock in Hybrid and all Electric Vehicles
 - DC-DC Step-Down Converters in Hybrid and all Electric Vehicles
 - DC-DC Step-Up Converters in Hybrid and all Electric Vehicles
 - DC/AC Conversion in Vehicles
 - High Voltage and Air Conditioning Training System
 - Measurement and diagnosis on electric motor
 - Engine Management systems
 - Ignition systems
 - Solar and Fuel Cells in Vehicles
 - Driver assistance systems
 - ABS/ASR/ESC Braking systems
 - Airbag systems

	<ul style="list-style-type: none"> • Vehicle lighting systems • Experimentation on Real Hybrid training vehicle • Different BUS systems • Engine Model • Set-up and testing of a charging station
2.	<p>Certification</p> <p>International Certification of non-brand related international industrial certification bodies shall be providable on basis of the following qualification schemes:</p> <ul style="list-style-type: none"> • Electric/Hybrid Vehicle Awareness • Electric/Hybrid Vehicle Hazard Management • Electric/Hybrid Vehicle Routine Maintenance • Electric/Hybrid System Repair and Replacement • Diagnosis, Testing and Repair of EV/HE
3.	<p>Interactive courseware</p> <p>All the training systems in the Lab setup should be accompanied with interactive courseware covering the above topics. All the courseware should be integrated into a common learning environment for the ease of management and monitoring of courseware. The courses should be clearly broken down into Number of hours, designed it in a structural way allowing the trainees to pick courses at different levels.</p> <p>All the courses should be also available as online version.</p> <p>The Digital library (assembly of all digital content course given) should be a collection of Reference, Learning and Training material. This library should be applicable to all engineering levels Universities, Institutions, Polytechnics, Training Centers and Corporate learning centers. Features of the Digital Library should be:</p> <p>Comprehensive Coverage</p> <p>The Digital Library should offer a wide range of animated interactive digital content in the given subjects. The content should align with current industry demands and oriented to build skills while enhancing learning. Students can access the content across different branches of engineering and application.</p> <p>Access</p> <p>It should give access to multiple contents accessible from any computer in the campus and an optional access must be provided though the internet. Students should be able to</p>

learn at their pace. Multiple students should be able access the same content from a Digital Library unlike a book which will have limited number of copies.

Interactive Content

The content should be highly interactive and interesting. Using this Multimedia Digital courses students should be able to understand various concepts with the help of rich Graphics, Animations, Videos. The courses should be to be managed by a Learning Management System (LMS).LAN installation of the Management System and Content must be executed to enable independency of Internet-speed/outages.

Learning Management System (LAN/Internet) — Features required are

- Friendly and attractive user interface
- Dashboard for viewing all relevant information on the platform in one glance should be provided
- Comprehensive reports, based on users, courses, and enrolments for administration should be possible
- Ability to add varied types of content, including PDF, videos, assignments, etc. should be possible
- Availability and rights to edit existing course contents should be provided
- Test database should be included
- Availability on mobile and tablet devices
- Administration of an unlimited number of students and courses should be possible
- Electronic monitoring of student progress should be possible
- Graphical presentation of progress in courses and tests should be possible
- Presentation of student or group results should be possible
- Reports on courses, tests, single users or classes should be possible
- Editing and creation of courseware should be possible
- Program should be capable of creating and editing questions, practical measuring exercises and sets of questions (question files) for electronic evaluation
- Easy creation of exercises and questions for courses and tests
- Program should be able to capable of automatically creating electronic tests from sets of questions (question bank)
- This program should allow supervisors to view, allocate and control what various active users see on screen via network interconnection
- View of screens as currently seen by users
- Full-screen view and remote control (via mouse) of individual screen contents should be possible
- Allocation of screen views allowing users to see what is on other users' screens should be possible
- Display of requests for help from users should be possible

List of Minimum Hardware

#	List of Minimum Hardware systems
1.	Computer Based modular blended learning system for hands on experimentation As per the global standards, what is required is a PC-based training system, featuring an interface with software that allows for interactive communications between the PC and actual experiments. The software must provide for theoretical background, set-ups and procedures for experiments, evaluation of measurements, control and visualization of power supplies, signal generators and measuring instruments. It must allow for the possibility of integration in a network. An integrated management system must be provided for administration for content, tests for trainees, evaluation of results and classroom management. The software has to be delivered in the English language and should be possible to also provide in the local language if requested.
2.	Automotive Electrical and Electronics Fundamentals Training Setup
3.	Automotive BUS Systems Training setup Modular based system with focus on CAN/FD, Flex Ray, RFID. Ethernet, LIN, MOST with applications
4.	Electric Vehicle safety training setup To include the following experiment topics. Safe Handling Fundamentals of Electric Drives HV interlock system DC-Dc step-up and Step-Down converters DC/AC conversions on-board electrical system running at 48 V
5.	Hybrid Vehicle Training System Integrated scan tool Different drive concepts Regenerative braking Integrated 4 channel oscilloscope USB connection to directly connect hardware and eLearning
6.	HV Battery Training System Integrated scan tool Real Lithium cells Integrated 4 channel oscilloscope USB connection to directly connect hardware and eLearning Removable cells with inbuilt faults
7.	HV Airconditioning Training System High-voltage battery compartment with built-in power supply High-voltage air-conditioning compressor Driving mode switch for switching between various driving situations Fault switches Built-in insulation monitors as used in the car industry with light to indicate insulation faults Possibility of controlling electrical components via USB computer connection
8.	ABS Braking Training System Practical experimentation of an electronically controlled ABS / ASR brake system Understanding and experimentation on braking systems Diagnostics and Fault Analysis should be possible
9.	Electronics Stability Control and wheel speed sensors training setup Response to different driving maneuvers Identification and function of different sensors Focus on ABS and ASR as well Investigation of control system

	diagnostics Fault simulation
10.	Modern Lighting systems Training System should include Xenon, LED and Daylight driving lights
11.	Airbag and Seat-Belt fundamentals Training System Modular based system with interactive courseware Should have a practical approach to the subject with a fully functional reusable airbag
12.	Electromechanical Parking brake Training Setup Globally many vehicles have replaced the conventional handbrake with a singly switch on the dashboard. This training systems should focus on this feature
13.	Training Vehicle with an integrated measurement environment Should be a Plug-in Hybrid model Should include breakout boxes with measuring points Should include fault switches Should include a Lithium-ion battery (200V- 600 V) Should be able to have Visual access to the components of the HV system Should be Diagnostics-capable with OBD tester and workshop tester There should be Cutout sections of the body for exploration into all important aspects of the components, e.g.: doors, bumpers, etc Should be able to perform measurement on the BUS Systems Should be integrated in the Digital learning environment It should be able to establish as wireless connection between the training vehicle and the computer
14.	Ignition systems training setup Experimental setup for the understanding of ignition systems such as Ignition timing, Conventional and modern ignition systems
15.	Engine Management Systems Training setup Modular system Drive unit module with crankshaft, camshaft and engine temperature sensor Programmable Engine Control Unit Lamda, mass air flow, rail pressure, knock and throttle position sensors injection valves module ignition coil module fault simulation Functional OBD interface Integrated measurement tools
16.	Direct Fuel Injection training system fault simulation Petrol variant Functional OBD interface Integrated measurement tools Include a programmable control unit USB connection to directly connect hardware and eLearning
17.	Petrol Direct injection Engine Model 4 Cylinder engine With Camshaft Adjustment With Water-cooled intercooler
18.	Electric-Drive Diagnostics training setup
19.	Solar and Fuel Cells training setup for Vehicles
As this Lab will cater to the global education and industry standards and should be in line with the technology of global technologies in this domain, the following topics should also be included with hardware for practical experimentation	

19.	Driver Assistance which includes topics such as sign detection and range detection
20.	Gesture control option – in modern vehicle we see that the boot/trunk of the vehicle is opened just by waving the leg beneath the boot/trunk
21.	Touch sensors in vehicles – touch sensors have become a norm in E-vehicles and this topic should also be a point of focus
22.	Parking assistance
23.	Traffic sign recognition – in modern vehicles we see that the vehicle has an option to automatically reduce speed when approaching a sign.
As this Lab setup caters to the Electrical vehicle domain, this lab should also focus on the infrastructure aspects of the Electric Vehicle	
24.	Electric Vehicle Charging Station installation trainer Set-up and testing of a charging station EV tester/Simulator with load simulation Fault Simulation, Wireless Charging

Section 6

SUBMISSION FORMS:

The Applicants are expected to respond to the EoI using the forms given in this section and all documents supporting EOI Criteria.

Proposal / Pre-Qualification Bid shall comprise of following forms:

Form 1: Covering Letter with Correspondence Details

Form 2: Details of the Applicant's Operations and

Consulting Business Form 3: Compliance Sheet for

Pre-Qualification Criteria

Form 1

Covering Letter on Letterhead of the bidder with Correspondence Details

<Location, Date>,

To,

**Registrar,
Rajiv Gandhi Proudhyogiki Vishwavidyalaya (RGPV),
Airport Road, Gandhi Nagar, Bhopal,
Madhya Pradesh, India- 462033**

Subject: EOI for “Selection of a Technology Partner to set up a Centre of Excellence for Research & Development and imparting high-end skill training in the field Automotive Electric and Hybrid Mobility”

Dear Sir/Madam,

This is with reference to your advertisement inviting” EOI for “Selection of a Technology Partner to set up a Centre of Excellence for Research & Development and imparting high-end skill training in the field Automotive Electric and Hybrid Mobility for RGPV, BHOPAL activities”. We, the undersigned, offer to provide the services for the same, please find below the details of our agency for your consideration:

S.no.	Information	Details of OEM
1	Name of the Contact Person	
2	Address of the Contact Person	
3	Name, designation and contact, address of the person to whom, all references shall be made regarding this EOI.	
4	Telephone number of the Contact Person.	
5	Mobile number of the Contact Person	
6	Fax number of the Contact Person	
7	Email ID of the Contact Person	
8	Corporate website URL.	
9	Name of the Organization:	
10	Head of the Organization (with designation):	
11	Legal Status (Whether Company, Proprietorship, Partnership, Society/Trust etc.	

12	Address of Head Office:			
13	Number of Offices (including Head Office): India & Abroad			
14	Annual Turnover (in Lakhs): (Last three Years)	2017-18	2018-19	2019-20
	i) Years of Operation (in Years):			
	ii) Date of commencement of Business:			
15	PAN Number			
16	Sales Tax/ VAT Registration Number			
17	Service Tax number			
18	Number of Employees:			
19	Number of Technical Staff			
20	Number of Non-Technical Staff			
21	List of major similar Projects undertaken and completed with Details (by the OEM)			
22	List five present major clients in integrated solution projects (by the OEM)			

We are hereby submitting our Expression of Interest in both printed format (2 copies) and as a soft copy in a CD/DVD. We understand that you are not bound to accept any Proposal you receive.

We fully understand and agree to comply that on verification, if any of the information provided here is found to be misleading the short listing process or unduly favors our company in the short listing process, we are liable to be dismissed from the EOI selection process or termination of the contract during the project.

We agree to abide by the conditions set forth in this EOI.

We hereby declare that our proposal submitted in response to this EOI is made in good faith and the information contained is true and correct to the best of our knowledge and belief.

Sincerely,

< Applicant's Name with seal >

Name: << Insert Name
ofContact person >>

Designation:

Signature:

Form 2

Details of the Applicant's Operations and Business

	Information Sought	Details to be Furnished of OEM
1	Name and address of the OEM Agency	
2	Incorporation status of the Agency	
3	Year of Establishment	
4	Date of registration	
5	ROC Reference No.	
6	Details of registration with appropriate authorities for service tax	
7	Name, Address, email, Phone nos. and Mobile Number of Contact Person	

Compliance Sheet for Pre-Qualification Criteria

S.No	Requirement/Compliance			Provide Compliance details (Yes/No) Ref Page No in EOI Other details, if any	Remarks
1	LEGAL				
	A.	1	The applicant must be either an OEM, or a Sole proprietor, or an individual Company/ Firm, or an Authorized Channel Partner of the OEM, or an Authorized system integrator of the OEM.		
	B	1	The OEM possess the requisite experience, resources and capabilities in providing the services necessary to meet the requirements, as described in the EOI document.		
		2	The EOI is complete in all respects and covers the entire scope of work as stipulated in the document.		
		3	OEM is meeting the Eligibility Criteria		
	C	1	A valid copy of all the above-mentioned certificates provided		
	D	1	The OEM should be in operation in India and/or abroad for at least 5 Years as on 31-Mar-2020		
		2	OEM or its Authorized Channel Partner is not be Blacklisted in India. A Self Declaration by the authorized signatory be submitted		
2	TECHNICAL				
	A	1	OEM is a manufacturer, designer and developer of didactical equipment		
		2	Single Point of Contact Provided		
			The OEM directly or through it's Channel Partner/Authorized system integrator/agent can offer detail Lab on following topics and this Lab must cater to the global education and industry standards and should be in line with the technology of global technologies in this domain, the following topics should also be included with hardware for practical		

		<p>experimentation</p> <ul style="list-style-type: none"> • Automotive Electric and Hybrid Mobility • Computer Based modular blended learning system for hands on experimentation • Automotive Electrical and Electronics Fundamentals Training Setup • Automotive BUS Systems Training setup • Electric Vehicle safety training setup • Hybrid Vehicle Training System • HV Battery Training System • HV Airconditioning Training System • ABS Braking Training System • Electronics Stability Control and wheel speed sensors training setup • Modern Lighting systems Training System • Airbag and Seat-Belt fundamentals Training System • Electromechanical Parking brake Training Setup • Training Vehicle with an integrated measurement environment • Ignition systems training setup • Engine Management Systems Training setup • Direct Fuel Injection training system • Petrol Direct injection Engine Model • Electric-Drive Diagnostics training setup • Solar and Fuel Cells training setup for Vehicles • Electric Vehicle Charging Station installation trainer • Interactive courseware • Learning Management System (LAN/Internet) • Any this more OEM can offer 		
	3	The OEM / Authorized System Integrator or channel partner should have been in existence for at least 10 years		
	4	The OEM should have been in the similar business and execution of similar projects as mentioned in EOI at least for last three continuous years and served at least three clients .		
	5	Reference, information and certificates from the respective clients certifying technical, delivery & execution capability of the OEM should be signed		

	6	The OEM must have its own developed integrated solution which can be customized as per the requirements of RGPV, BHOPAL. The solution should have been implemented and in use for last two years in at least two Educational Institutions/organisations having its branches/offices/colleges at various locations where the value of each assignment should be equal or more than 200 Lakh(INR)		
	7	The OEM should have a Regional Office in India or should be represented by an Authorized System Integrator or channel partner (who should work in similar segment)		
	8	Organization should have strong quality management and in-house quality assurance group. The OEM should be responsible to provide certification through a third-party Certification Partner		
	9	the offer Lab Setup should be aimed at Industry connected skill development programs		
	10	all the Hardware should be fit to meet highest global educational standards		
3	FINANCIAL			
	A.	1	Cost of EOI Document (free of cost)	
		2	The OEM should have annual turnover of at least Rs. 50 Cr (Rupees fifty Crores Only) during each of the last three financial years (2016-17, 2017-18, and 2018-2019) from similar services.	
		3	Copies of audited balance sheets of last three financial years (2016-17, 2017-18, and 2018-19) should be enclosed.	
		4	OEM should have a positive net worth during the last three financial years (2016-17, 2017-18, and 2018-19)	

Format for Consortium Agreement

(On non-judicial stamp paper of appropriate value to be purchased in the name of executants companies or as required by the jurisdiction in which executed)

THIS Consortium Agreement executed on this _____ day of _____ Two Thousand _____

By:

M/s _____

a Company/Partnership Firm/Sole Proprietorship

Organisation incorporated under the Acts/Laws of _____ and having its Registered Head Office at _____ (hereinafter called the "Lead Member/First Member" which expression shall include all its officers, successors and assignees);

and

M/s _____

a company /Partnership Firm/Sole Proprietorship Organisation

incorporated under the Acts/Laws of _____ and having its Registered Head Office at _____ (hereinafter called the "Second Member" which expression shall include all its officers, successors and assignees).

The Lead Member and the Second partner shall collectively hereinafter be called as the "Consortium Members" for the purpose of submitting the EOI to RGPV, BHOPAL (hereinafter called the "Owner" in response to invitation of EOI for "to set up a Centre of Excellence for Research & Development and imparting high-end skill training in the field Automotive Electric and Hybrid Mobility"

WHEREAS EOI document stipulates that maximum two bidders may form a Consortium among themselves and apply against this EOI, provided they fulfill the following eligibility criteria:

1. They should have legally valid Consortium Agreement.
2. Consortium as a whole shall meet the qualifying norms specified in the EOI, they participate.
3. The Consortium member shall authorize the lead partner by submitting a power of Attorney as per the prescribed format duly signed by the authorized signatories. The lead partner shall be authorized to receive instructions for and on behalf of the Consortium Partner and entire execution of the contract.
4. The lead partner and the second member shall be jointly severally responsible and be held liable for the purpose of guaranteed obligation and any other matter as required under the contract.
5. Work order will be placed to lead member of the Consortium.

AND WHEREAS the members of Consortium together shall strictly comply the eligibility criteria of EOI.

AND WHEREAS EOI has been proposed to be submitted to RGPV, BHOPAL by Lead Member based on this consortium agreement between the two signed by both the members.

NOW THEREFORE THIS INDENTURE WITNESSETH AND IT IS AGREED BY AND BETWEEN THE PARTIES AS UNDER:

In consideration of the above premises, in the event of short listing of the Consortium, both the Parties to this Consortium agreement do hereby agree to abide themselves as follows:

1. M/s----- shall act as Lead Member for and on behalf of ConsortiumMember.
The said Consortium member further declare and confirm that they shall jointly and severally be bound and shall be fully responsible to RGPV, BHOPAL for “to set up a Centre of Excellence for Research & Development and imparting high-end skill training in the field Automotive Electric and Hybrid Mobility” as per the scope of work. For successful performance of the work, obligations under the same by the LEAD member are as follows:
2. Despite any breach by the Lead Member or other Member of the Consortium agreement, The Member do hereby agree and undertake to ensure full and effectual and successful performance of the contract with the Owner and to carry out all the obligations and responsibilities under the said contract in accordance with the requirements of the contract.
3. If the owner suffers any loss or damage on account of any breach of the Contract or any shortfall in the performance in meeting the performance guaranteed as per the specification in terms of the contract, the Members of this agreement undertake to promptly make good such loss or damages caused to the Owner, on its demand without any demur. It shall not be necessary or obligatory for the Owner to proceed against Lead Member to this agreement before proceeding against or dealing with the other member. The obligation of each of the member is absolute and not independent of the Consortium or any member.
4. The financial liability of the members of this Consortium agreement to the Owner, with respect to any of the claims arising out of the performance or non-performance of the obligations set forth in the said Consortium agreement, read in conjunction with the relevant conditions of the contract shall, however, not be limited in any way so as to restrict or limit the liabilities of any of the member.
5. It is expressly understood and agreed between the members to this Consortium agreement that the responsibilities inter se amongst the members shall not in any way be a limitation of joint and several responsibilities and liabilities of the Members to the Owner. It is clearly understood that the Lead member shall ensure performance under the agreement and if one or the other Consortium Member fail to perform its respective obligations under the agreement, the same shall be deemed to be a default by both Consortium members. It will be open for the Owner to take any steps, punitive and corrective action including the termination of contract in case of such default also.

6. This Consortium agreement shall be construed and interpreted in accordance with the laws of India and shall be subjected to exclusive jurisdiction within Delhi in all matters arising there under.
7. In case of an award of a contract, both the members to the Consortium agreement do hereby agree that Lead partner shall furnish Performance Bank guarantee for value of 10% of the Contract price and additional 5% by the other Consortium partner in the form of an unconditional irrecoverable Bank guarantee in the prescribed format and as per terms of contract.
8. It is further agreed that the Consortium agreement shall be irrevocable and shall form an integral part of the contract and shall continue to be enforceable till the Owner discharges the same. It shall be effective from the date first mentioned above for.
9. In case of any dispute amongst the members of the Consortium, Owner shall not be in any way liable and also the Consortium members shall not be absolved from the contractual obligation in any manner.

IN WITNESS WHEREOF the members to the CONSORTIUM agreement have through their authorized representatives executed this agreement and affixed Common Seals of their companies, on the day, month and year first mentioned above.

1. Common Seal of

Has been affixed in my/our presence Pursuant to the Board of Director's resolution dated.....

Signature.....

Name.....

Designation.....

For Lead/First Member

(Signature of authorized representative)

Name.....

Designation.....

Common Seal of the Company

.....

10. Common Seal of

Has been affixed in my/our presence Pursuant to the Board of Director's resolution dated.....

Signature.....

Name.....

Designation.....

For Second Member

(Signature of authorized representative)

Name.....
Designation.....
Common Seal of the Company
.....

WITNESS:
1. Signature.....

Name.....
Office Address.....

2. Signature.....

Name.....

Office Address.....

FORM OF POWER OF ATTORNEY FOR CONSORTIUM

(On Non-Judicial Stamp paper of Appropriate Value to be purchased in the name of CONSORTIUM)

KNOW ALL MEN BY THESE PRESENTS THAT the Consortium Members whose details are given hereunder..... have formed CONSORTIUM and having our Registered Office/Head Office at.....(hereinafter called the Consortium' which expression, shall unless repugnant to the context or meaning thereof, include its successors, administrators and assigns) do hereby constitute, nominate and appoint M/s..... a company incorporated under the laws of and having its Registered office at as our duly constituted lawful Attorney(hereinafter called' Lead Member") to exercise all or any of the powers for and on behalf of the CONSORTIUM in regard to the EOI document for " to set up a Centre of Excellence for Research & Development and imparting high-end skill training in the field Automotive Electric and Hybrid Mobility" for RGPV, BHOPAL activities" for which EOI has been invited by the Owner namely(RGPV, BHOPAL), to undertake the following acts:

- i. To submit proposal, participate and negotiate in respect of the aforesaid Bid-Specification of the Owner on behalf of the Consortium.
- ii. To negotiate with Owner the terms and conditions for award of the contract pursuant to the aforesaid EOI and to sign the contract with the Owner for and on behalf of the Consortium.
- iii. To do any other act or submit any document related to above.
- iv. To receive, accept and execute the contract for and on behalf of the Consortium.
- v. To submit the contract performance security in the form of an unconditional irrecoverable Bank guarantee in the prescribed format and as per terms of the contract.

It is clearly understood that the Lead member shall ensure performance of the contract and if one or the other member fails to perform its portion of the contract, the same shall be deemed to be a default by all members.

It is expressly understood that this power of attorney shall remain valid binding and irrevocable till completion of the project or liability period in terms of the contract.

The CONSORTIUM hereby agrees and undertakes to ratify and confirm all the whosoever the said Lead member quotes in the bid, negotiates and signs the contract with the Owner and /or proposes to act on behalf of the Consortium by virtue of this Power Of Attorney and the same shall bind the CONSORTIUM as if done by itself.

IN WITNESS THEREOF the Members Constituting the CONSORTIUM as aforesaid have executed these presents on thisday of under the Common Seal of their

Companies.

For and on behalf of the CONSORTIUM Member

.....

.....

The Seal of the above CONSORTIUM Member:

The seal has been affixed there unto in

the presence of: WITNESS

1. Signature.....

Name.....

Designation.....

Occupation.....

2. Signature.....

Name.....

Designation.....

Occupation.....

Annexure-II

SELF-DECLARATION – NON-BLACKLISTING

To,

**Registrar,
Rajiv Gandhi Proudhyogiki Vishwavidyalaya (RGPV),
Airport Road, Gandhi Nagar, Bhopal,
Madhya Pradesh, India- 462033**

Sir,

In response to the EOIRefNo. _____ Dated _____. Development & Implementation of to set up a Centre of Excellence for Research & Development and imparting high-end skill training in the field Automotive Electric and Hybrid Mobility” for RGPV, BHOPAL activities, I/ We hereby declare that presently our Company/ Firm _____ is _____ having unblemished record and is not declared ineligible for corrupt & fraudulent practices either indefinitely or for a particular period of time by any State/ Central Government/ PSU/Autonomous Body.

We further declare that presently our Company/firm _____ is not blacklisted and not declared ineligible for reasons other than corrupt & fraudulent practices by any State/ Central Government/ PSU/ Autonomous Body on the date of Bid Submission.

If this declaration is found to be incorrect then without prejudice to any other action that may be taken, my/ our security may be forfeited in full and the tender if any to the extent accepted may be cancelled.

Thanking you,

Yours faithfully,

Name: - Authorized Signatory: - Seal of the Organization: -

Date:

Place:

Annexure -III

DETAILS OF SIMILAR WORKS EXECUTED

S N o	Name of Work/ Project & Locatio n	Owner of sponsoring organizatio n	Cost of Wor k	Date of commencemen t as per contract	Stipulated date of completio n	Actual date of completio n	Litigation/Arbitratio n pending in progress with details	Name, Designation and Address/teleph o ne number of officer to whom reference may be made	Remar k s
1	2	3	4	5	6	7	8	9	10

Name:- Authorized Signatory: - Seal of the Organization: -

Date:

Place: