In AWE

towards green

PRESENTS LEADERSHIP WORKSHOP ON

SMART CITIES SUSTAINABLE CONSTRUCTION

SUPPORTED BY

IGBC

On Friday , 5th February,2016,
at DEVELOPMENT ALTERNATIVES Headquarters
B-32,Tara Crescent, Qutub Institutional Area,
New Delhi

KNOWLEDGE PARTNERS

ENERGY MANAGEMENT EUREM Energy Efficiency Specialist licensed for India

Powered by: AHK Indo-German Chamber of Commerce Deutsch-Indische Handelskammer Mumbai · Delhi · Kolkata · Chennai Bangalore · Pune · Düsseldorf

SMART MOBILITY — WRI INDIA

GREEN BUILDINGS — AEON Consultants

SUSTAINABLE CONSTRUCTION — Development Alternatives

INDOOR AIR QUALITY — be BREATHE EASY

Register for Participation

contact: inawetowardsgreen@gmail.com
www.inawe.in mobile:9810401315

AGENDA

- **Energy Efficiency in Built Environments**
- **Clean Energy and Energy Management**
- **Interactive session on Energy Efficiency**
- **Capacity Building with the EUREM Energy Efficiency Specialist Training**

EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK

Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

EUREM
Energy Efficiency Specialist
licensed for India

Harshad Phadnis
Indo-German Chamber of Commerce (IGCC / AHK Indien)

Leadership Workshop on Smart Cities and Sustainable Construction

New Delhi, February 05, 2016

– Energy Efficiency in Built Environments
– Clean Energy and Energy Management

INDO-GERMAN AHK
Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

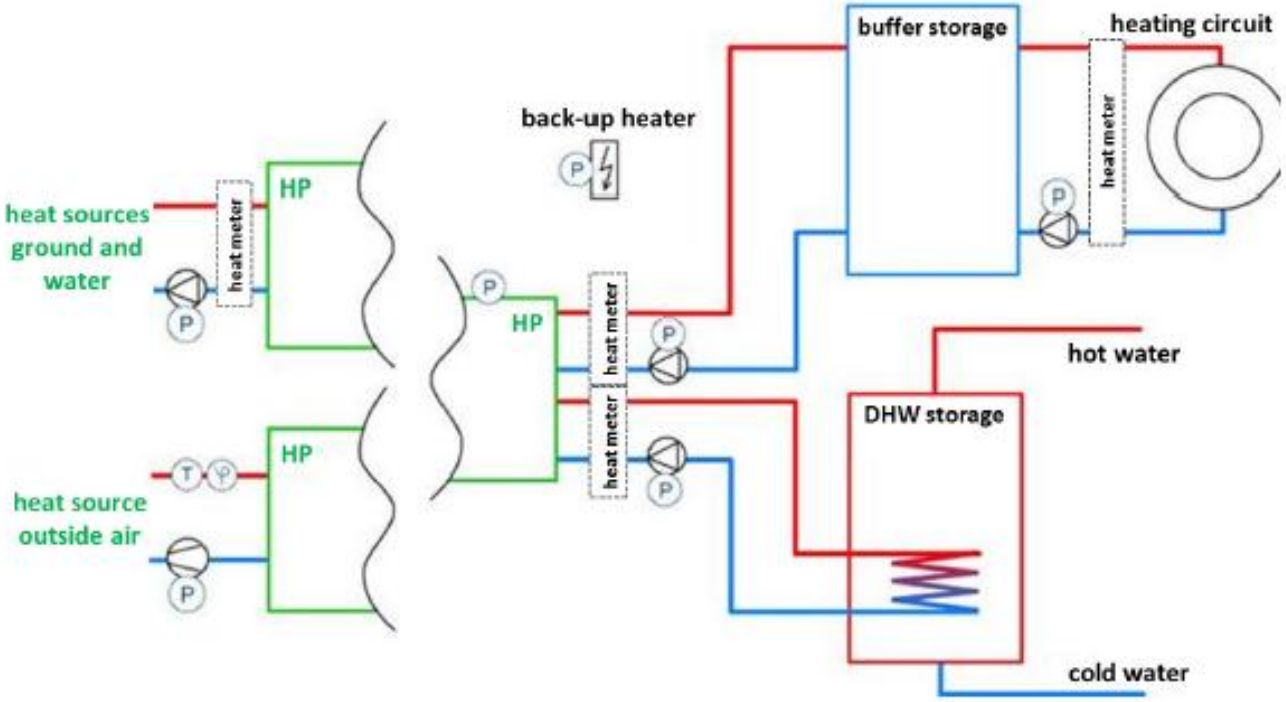
BUILT ENVIRONMENT SOLUTIONS

- **A Heat Pump captures latent heat from ambient air (also from waste heat)**
- **It can transfer this heat to water as per requirement (e.g. hot water, chilled water or preheating water)**
- **It can simultaneously generate hot and chilled water for air conditioning purpose**
- **The biggest advantage is that this is done by utilizing minimum amount of electricity**

BUILT ENVIRONMENT SOLUTIONS

Principle:

An eutectic fluid (which has low boiling point) has a tendency to absorb heat from the atmosphere



BUILT ENVIRONMENT SOLUTIONS

- **Heat of the fluid is upgraded (by compression) with a compressor**
- **The hot fluid is passed thorough one side of a heat exchanger, while water is passed through the other side of the heat exchanger**
- **Water picks up the heat and we get hot water**
- **After losing its heat to water the fluid passes through another heat exchanger where water at ambient temperature enters on the other side and loses its heat to the fluid thus getting chilled**

BUILT ENVIRONMENT SOLUTIONS

Water to Water Heat Pump

- We get hot and chilled water generated simultaneously at the energy cost of one operation

Air to water Heat Pump

- A fan in the heat pump draws large quantities of warm air through the evaporator coil which acts as heat collector
- Fluid inside the evaporator coil absorbs the free latent heat from the drawn air and transfers the heat to water

BUILT ENVIRONMENT SOLUTIONS

Types of Heat Pumps

Heat Pumps for generating hot water

- **Heat Pumps are also used in climates where water temperature is very low**
- **Heat Pumps can heat water from 0°C to 60°C as per requirement or application**

BUILT ENVIRONMENT SOLUTIONS

Types of Heat Pumps

Heat Pump for Hot water + Chilled Water

- **Heat Pump is a duel function unit that fulfills both requirements of heating and cooling suitable for areas where hot water, chilled water, air-conditioning and room heating is required, such as:**

- **residential buildings**
- **commercial buildings**
- **Swimming pools/hotels, and**
- **Hospitals**

BUILT ENVIRONMENT SOLUTIONS

Types of Heat Pumps

Heat Pump for Chilled water:

- **Typically for commercial use i.e. replacement for water coolers or instantaneous chillers**
- **It can be used in climates where water temperatures are unfavorably high**
- **Such a Heat Pump can cool water from any ambient to 5°C to 6°C or even -ive temperature as required**

BUILT ENVIRONMENT SOLUTIONS

Advantages of Heat Pumps:

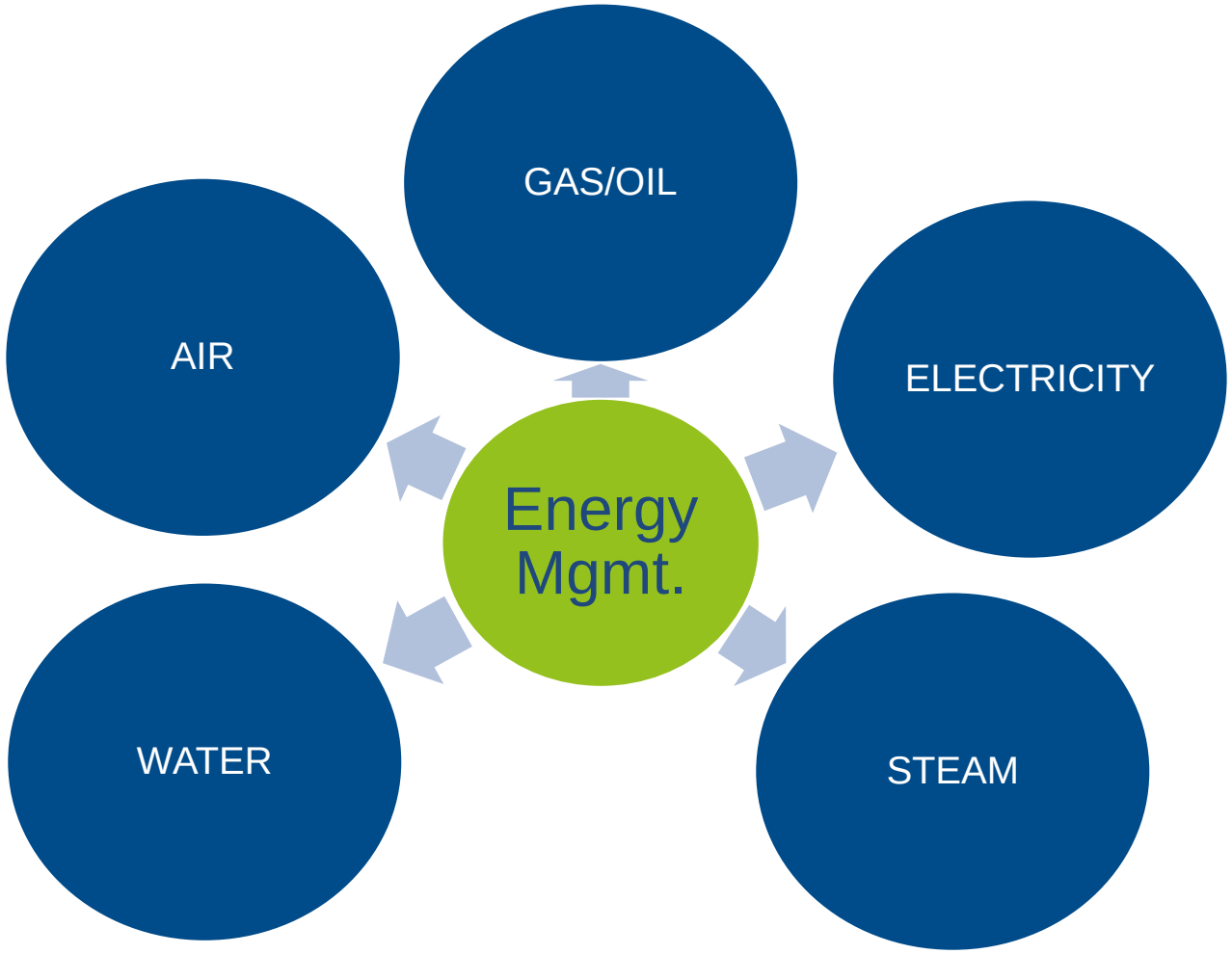
- **Saves energy & related costs by over 65% to 70% compared to geysers, solar WH or any other heating systems**
- **A fully automatic system**
- **Compact system using less floor space**
- **Caters to all range of capacity needs**
- **Simultaneously generates chilled & hot water on one energy cost**
- **Environment friendly**
- **80% depreciation can be claimed during first year**

EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

ENERGY MANAGEMENT

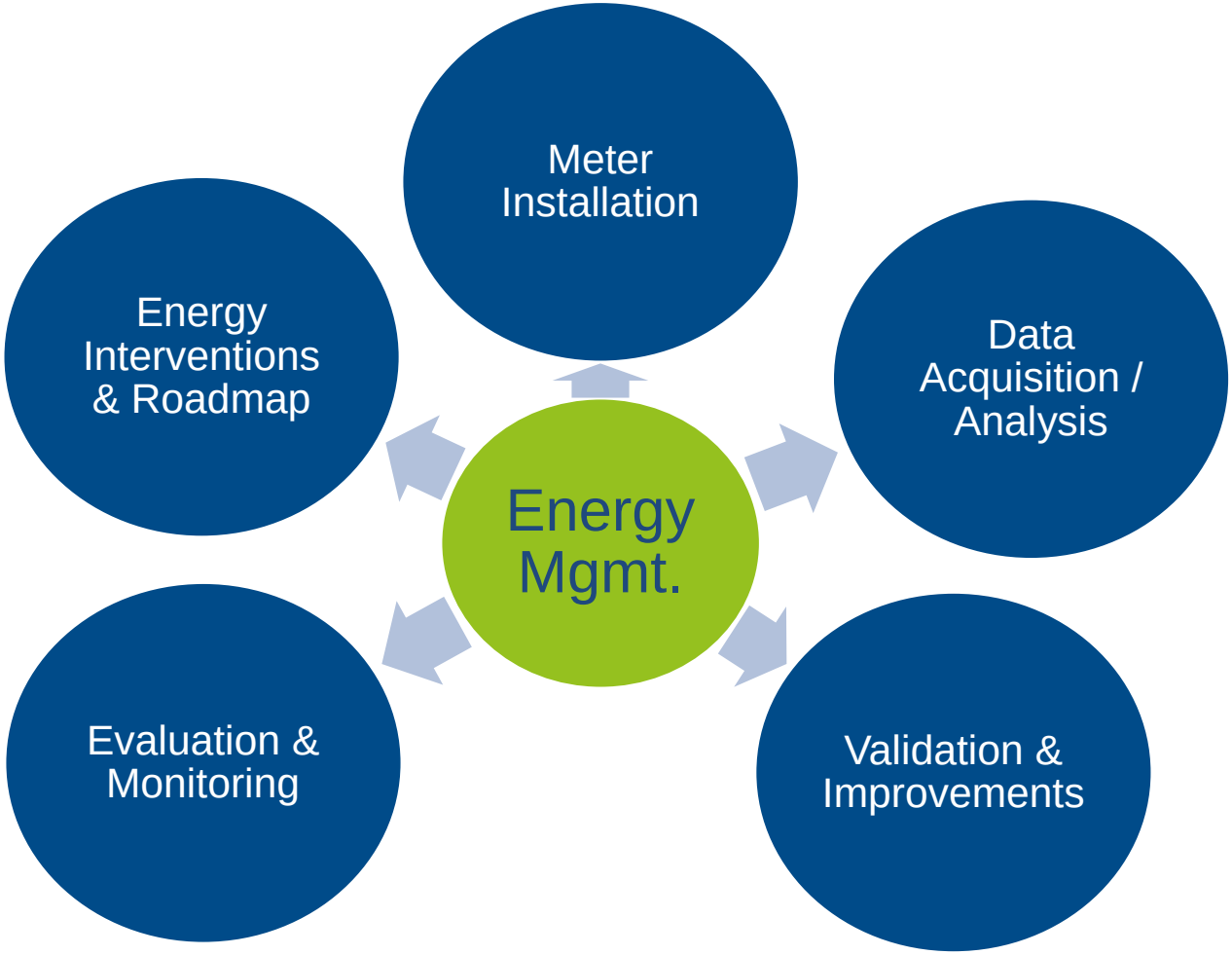


EUREM
Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK
Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

ENERGY MANAGEMENT



EUREM
Energy Efficiency Specialist
licensed for India

INDO-GERMAN AHK
Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

EUREM
Energy Efficiency Specialist
licensed for India

Achim Rodewald **Harshad Phadnis**
Indo-German Chamber of Commerce (IGCC / AHK Indien)

Leadership Workshop on Smart Cities and Sustainable Construction

New Delhi, February 05, 2016

Interactive session: Be an Energy Efficiency Star of your Organization

INDO-GERMAN AHK
Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

Interactive session/Group Excercise

Tasks:

- **Analyzing energy consumption**
- **Energy cost components**
- **Deliberation on possible solutions**

EUREM
Energy Efficiency Specialist
licensed for India

Achim Rodewald
Indo-German Chamber of Commerce (IGCC / AHK Indien)

Leadership Workshop on Smart Cities and Sustainable Construction

New Delhi, February 05, 2016

CAPACITY BUILDING WITH THE EUREM ENERGY EFFICIENCY SPECIALIST TRAINING

INDO-GERMAN AHK
Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

BACKGROUND

Infastructure development cannot keep up with economic growth

Insufficient energy supply systems lead to electricity failures

Increasing fuel and energy prices

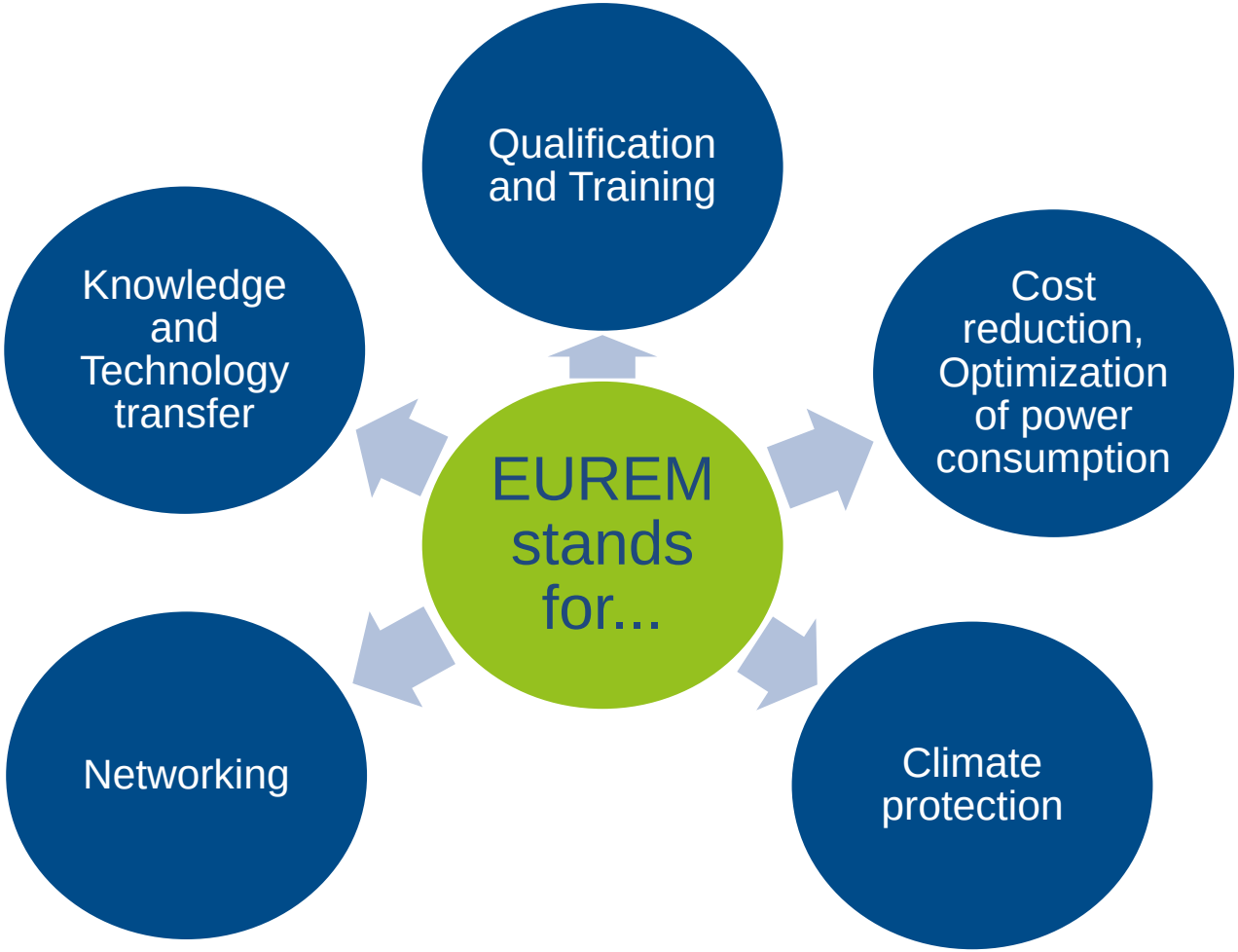
Sustainable and applicable energy efficiency solutions are required in the Indian economy

EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

EUREM VALUES



EUREM
Energy Efficiency Specialist
licensed for India

INDO-GERMAN AHK
Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

WHY INVEST ?

Invest and get...

- technical know-how and management skills
- access to a worldwide network
- higher qualifications for your employees
- calculation tools for energy projects within your company
- a first commercially viable energy project prepared to be implemented

...results

- Optimize energy consumption and cut power costs
- Increase your companies' competitiveness
- Contribute actively to climate protection and reduce your carbon footprint
- **The energy projects are tailor-made for your company, developed calculated by your staff and ready for implementation**
- **The first energy project is your first ROI in the EUREM cooperation**

EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

TAILORED CONCEPT

- Training includes **technical** and **management** components
  - ➢ syllabus has been carefully adapted to Indian standards, terms and conditions, new content relevant for the Indian market has been especially developed and implemented.

Analyze your company's energy situation and develop commercially viable energy projects on a sustainable basis.

EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

INDIVIDUAL CERTIFICATE

→ **reinforces personal competitiveness** (certified by IGCC and IHK Nürnberg)

Value for the employee

→ chance of further education

→ specialization on energy efficiency

EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK Indo-German Chamber of Commerce Deutsch-Indische Handelskammer Mumbai · Delhi · Kolkata · Chennai Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

ENERGY PROJECT

- begins where improvement potential in the participants company has been identified
- recommendations bring **direct financial benefits,** post training and implementation

Optimizing a centralized Cooling System for Machine Components*	
Energy saving potential	360 MWh / a
Cost saving potential	22.05 lakh INR / a
Investment cost for measurements	3.15 lakh INR / once
Payback period	0.15 year / 2 months

* Closed Loop System using Electrical Drive and Programmable Logic Controller

EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

BENEFITS

→ Increase the overall competitiveness of your company

- ✓ Gain professionally trained employees and higher value of human capital
- ✓ Motivate and support your employees
- ✓ Globally recognized certificate licensed by IGCC and IHK Nürnberg
- ✓ Implement energy projects and cut your power costs
- ✓ Ensure continuous improvement
- ✓ Gain higher reputation
- ✓ Reduce your company's carbon footprint as part of your Corporate Social Responsibility (CSR) efforts

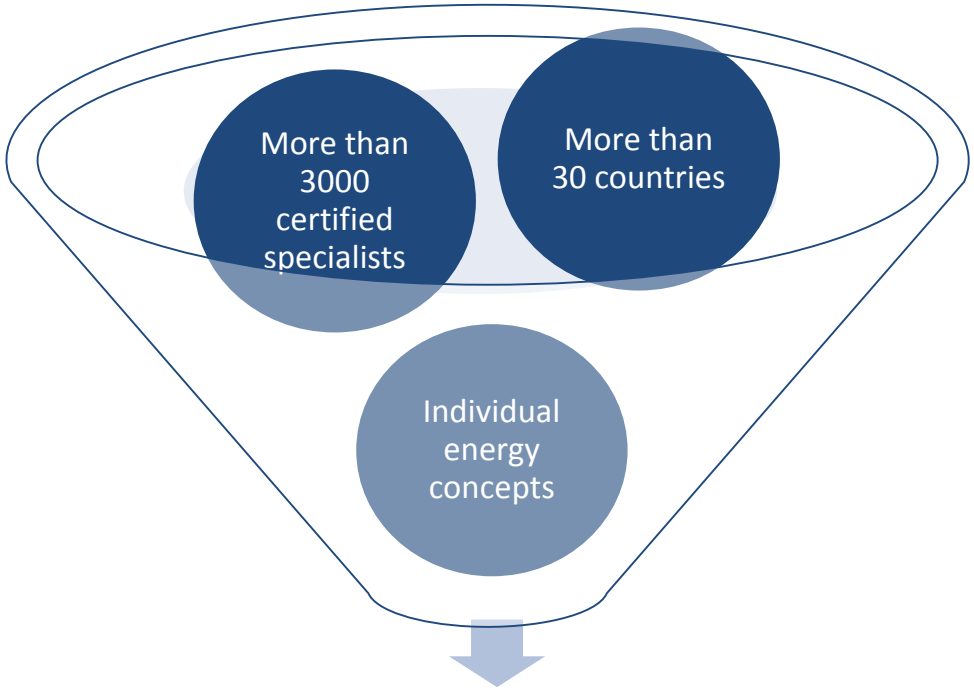
win – win situation

EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

SAVINGS



- ✓ **energy savings of 1,500,000 MWh per year**
- ✓ **cost savings of 60 million Euros per year**
- ✓ **CO_2 reduction of 400,000 tons per year**
- ✓ **Investments of 200 million Euros.**

EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK
Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

Course Details

Attend workshops, register with and use the e-Forum

Take written exam

Develop energy project

Final presentation of the energy project

Energy Efficiency Specialist

EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK

Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

COURSE DETAILS

- **168 lessons (21 days + 1 day)** over a period of appr. **3 months**
- **1st block of 3 days** (Thursday to Saturday), **9 blocks of 2 days** (Friday and Saturday)
- **2nd Batch** starts on **16th June, 2016**, in **NCR**
- **Workshops** until **17th September, 2016**
- **Written exam** on **30th September, 2016**
- **Energy concept** until **21st October, 2016**
- **Oral exam** on **10th and/or 11th November, 2016**

EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

COURSE DETAILS

The workshops will be held over a period of ten blocks within three months. The planned dates for the second EUREM training starting in New Delhi on **16th June, 2016** are:

Block	Dates	Block days
I	16.06. – 18.06.2016	3
II	24.06. – 25.06.2016	2
III	08.07. – 09.07.2016	2
IV	15.07. – 16.07.2016	2
V	29.07. – 30.07.2016	2
VI	05.08. – 06.08.2016	2
VII	19.08. – 20.08.2016	2
VIII	26.08. – 27.08.2016	2
IX	09.09. – 10.09.2016	2
X	15.09. – 17.09.2016	3

EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

TOPICS

1. Basics and control technologies — 8 lessons @ 45 min

2. Energy efficient buildings — 8 lessons @ 45 min

3. Electrical applications — 24 lessons @ 45 min

   3.1 Electrical drives — 8 lessons @ 45 min

   3.2 Compressed air — 8 lessons @ 45 min

   3.3 Lighting — 8 lessons @ 45 min

EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

TOPICS

4. Air conditioning and ventilation	24 lessons @ 45 min
4.1 A/c and vent technologies	12 lessons @ 45 min
4.2 Cooling technologies	12 lessons @ 45 min
5. Heat technologies	36 lessons @ 45 min
5.1 Heating	8 lessons @ 45 min
5.2 Geothermal applications	4 lessons @ 45 min
5.3 Process heat	8 lessons @ 45 min
5.4 Co-/Tri-generation	8 lessons @ 45 min
5.5 Biogas	4 lessons @ 45 min
5.6 Biomass	4 lessons @ 45 min

EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

TOPICS

6. Solar technologies	20 lessons @ 45 min
6.1 Solar thermal	8 lessons @ 45 min
6.2 Solar photovoltaics	8 lessons @ 45 min
6.3 Hybridisation	4 lessons @ 45 min
7. Energy regulations and industry	12 lessons @ 45 min
8. Energy management	8 lessons @ 45 min
9. Efficiency and project management	12 lessons @ 45 min
10. Business Responsibility/CSR	8 lessons @ 45 min
11. Financing En Eff-measures for SMEs	8 lessons @ 45 min
12. Hands-on training – M&V	8 lessons @ 45 min

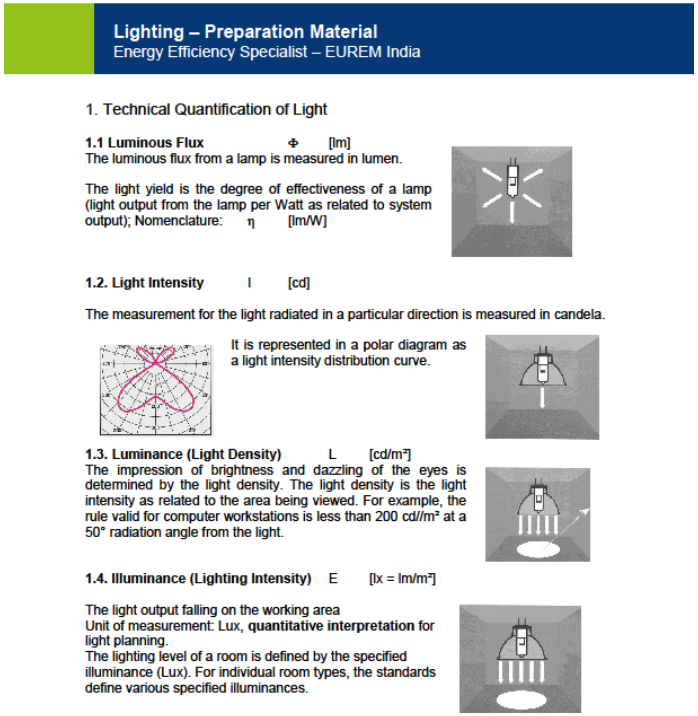
EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

PREPARATION MATERIAL

- provides basic knowledge
- easily understandable
- mini – tasks including solutions
- graphics, functions and pictures



Common knowledge base as starting point for all training modules

EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK Indo-German Chamber of Commerce Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

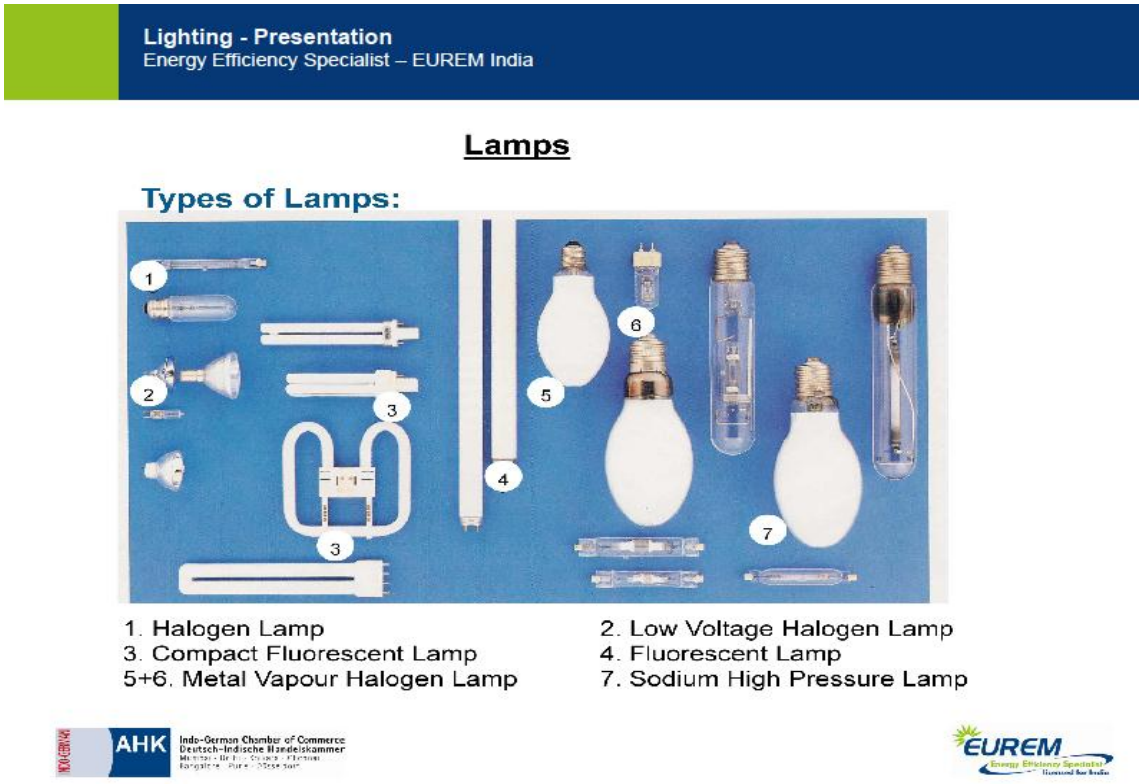
1956-2016 | Always yours

PRESENTATIONS

- Show optimization strategies and functional principals including graphics and calculation methods
- Introduce new technologies

→ in-depth knowledge of all contents

→ overview of basic approaches



EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK Indo-German Chamber of Commerce Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

CASE STUDIES

- Key self-study element
- Focus on practical examples relevant for India

→ Get an overview of project details and procedures

→ Gain practical and theoretical knowledge in all subjects

Geothermal applications – Case study
Energy Efficiency Specialist – EUREM India

Water-Source Heat Pumps (WSHP).
(using Geothermal Heat for Air conditioning)

Customer:	Apollo Hospitals, Hyderabad, India.
Solution by:	Geothermal India.
Project Size:	200+ TR, Size: 40000 sqf, Ground and 4 levels

Apollo Hospital, Hyderabad, India

EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

EXERCISES

- focus on topics of the seminar module content
- Basic tasks and data are given
- solved step by step

→ Calculation process becomes transparent

→ Connections between specific parameters become evident

Air conditioning – Exercise
Energy Efficiency Specialist – EUREM India

Design Data

- Country: India
- Cities, Outdoor Design Temperature & geographical data

	Summer temperature (°C)	Longitude	Latitude
Hot and dry zone (Jaisalimer)	DB 42.5 / MCWB 23.1	70.9°E	26.92°N
Warm and humid (Chennai)	DB 37.3 / MCWB 26.7	80.27°E	13.08389°N
Composite (Allahbad)	DB 42.2 / MCWB 23.5	81.85°E	25.45°N
Moderate (Bangalore)	DB 34 / MCWB 19.6	77° 34'E	12°58' N

EUREM Energy Efficiency Specialist licensed for India

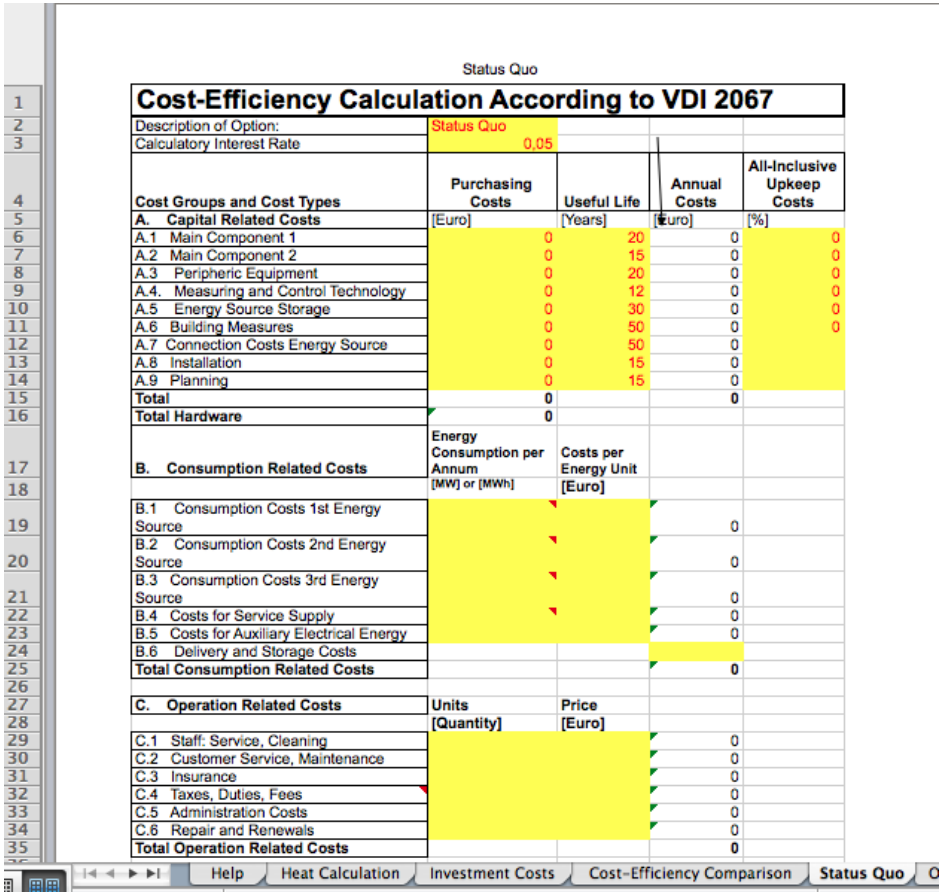
INDO-GERMAN AHK Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

CALCULATION TOOLS

- Excel sheets with integrated formulas and instructions
- Used during lessons and for self study
- Can be used for further energy projects within you company, even after years

→ Enable quick and simple technical and economic calculations



Status Quo

Cost-Efficiency Calculation According to VDI 2067

Description of Option:	Status Quo
Calculatory Interest Rate	0,05

Cost Groups and Cost Types	Purchasing Costs	Useful Life	Annual Costs	All-Inclusive Upkeep Costs
A. Capital Related Costs	[Euro]	[Years]	[Euro]	[%]
A.1 Main Component 1	0	20	0	0
A.2 Main Component 2	0	15	0	0
A.3 Peripheric Equipment	0	20	0	0
A.4. Measuring and Control Technology	0	12	0	0
A.5 Energy Source Storage	0	30	0	0
A.6 Building Measures	0	50	0	0
A.7 Connection Costs Energy Source	0	50	0	
A.8 Installation	0	15	0	
A.9 Planning	0	15	0	
Total	**0**		**0**	
Total Hardware	**0**			

B. Consumption Related Costs	Energy Consumption per Annum [MW] or [MWh]	Costs per Energy Unit [Euro]	
B.1 Consumption Costs 1st Energy Source			0
B.2 Consumption Costs 2nd Energy Source			0
B.3 Consumption Costs 3rd Energy Source			0
B.4 Costs for Service Supply			0
B.5 Costs for Auxiliary Electrical Energy			0
B.6 Delivery and Storage Costs			
Total Consumption Related Costs			**0**

C. Operation Related Costs	Units [Quantity]	Price [Euro]	
C.1 Staff: Service, Cleaning			0
C.2 Customer Service, Maintenance			0
C.3 Insurance			0
C.4 Taxes, Duties, Fees			0
C.5 Administration Costs			0
C.6 Repair and Renewals			0
Total Operation Related Costs			**0**

Help | Heat Calculation | Investment Costs | Cost-Efficiency Comparison | Status Quo

EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK

Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

CHECKLISTS

- Helpful tool to detect weaknesses within the company
- On-site usage to ensure completeness of your energy projects

→Show suitable optimization measures

→Base to put measures into action

Air conditioning - Checklist
Energy Efficiency Specialist – EUREM India

Transported Air Quantity (Volume Flow and Runtime)	Yes	No
• Reduce air pollutants directly at their source.		
• Extraction at source if possible, otherwise spatial separation of larger sources of heat, moisture and contaminants.		
• Reduce external loads through appropriate sun protection.		
• Adjust volume flow and runtime to the periods when rooms are used: ✓ When demand is anticipated use time-related control e.g. via timer with weekly programming function. ✓ If demands cannot be anticipated use measuring parameters (e.g. CO2 sensor, occupancy sensor).		
• If a ventilator serves several rooms with differing ventilation requirements in terms of period, provide a combination of ventilator control and room volume flow control.		
• Structurally separate all zones with very different use from each other if possible and separate the areas that generate internal heat loads (e.g. separate copy room, machine rooms).		
• Ventilation is normally not used for the removal of heat from engines and equipment; use water-cooling.		
• To ensure good indoor air flushing with supply air, direct the airflow properly and prevent so-called air short circuits between the supply air and exhaust ducts. As for the suction of supply air, make sure that it is sufficiently free of pollutants (openings high enough above the floor, filtering).		
• Check existing control functions in regular intervals and make sure that they are up to date.		
• Ensure that the various ventilation and air-conditioning systems are coordinated by a central control system.		
Temperature Difference Between Supply Air and Desired Room Air Temperature		
• Reduce the amount of outdoor air to the necessary minimum: volume flow design needs to be person-centred (as a rule 30 m³/h, for smokers up to 70 m³/h); supply of outdoor air according to requirements and desired temperatures.		
Ventilator Efficiency		
• Choose ventilator type, size and control options according to ventilation requirements.		
• In case of fluctuating demand the volume flow should be made variable by corresponding ventilator control, as ventilator performance decreases exponentially with the volume flow. Particularly in the performance range of up to 5kW speed control with frequency converter is recommended. ✓ As an alternative, the combination of pole-changing motors and adjustable vane control results in increased efficiency, equally blade control of axial ventilators. ✓ Not recommended for fluctuating demand are bypass control and throttle control.		
• Ventilator operation in optimal efficiency mode: When choosing ventilators and motors make sure that optimum efficiency is not related to maximum but standard performance in partial load operation.		
• Motors recommended for the performance range >10 kW are three-phase motors. Below 10 kW electrically commutated motors (EC motors) are more efficient.		

EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK Indo-German Chamber of Commerce Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

WHO SHOULD PARTICIPATE?

- Plant Managers
- Production Managers
- Energy Representatives
- Process Engineers
- Operation Technicians
- Consultants
- Facility and Maintenance Managers
- Shop Floor Managers

EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK

Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

TRAINERS

- Profound technical know-how
- Years of professional experience in energy related industry sectors
- Broad experience in project management, especially with regard to commercial viability
- Experience in further education
- Contacts to relevant and reliable companies and consultants

EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

ABOUT EUREM

1992
Establishing the CCI User Club Energy Efficiency at the local CCI in Nuremberg

2003
Start of the EUREM in the EU (A, D, GB, PT)

2006 - 2009
Start of the EUREM Net with 15 partners in 13 EU countries

2008 - 2013
Global implementation in 20 countries; Start of EUREM+ project for mainly Eastern European Countries

In preparation: South Africa, Mexico, **INDIA**

July 2014
Start of the first EUREM-training in Pune, India

EUREM-Trainings established in these countries:

23rd April 2015: Start of the first EUREM-trainings in Bangalore
7th May 2015: Start of the first EUREM-training in New Delhi , 2nd training in Pune
III/2015 and II/2016: Start of the first EUREM-training in Mumbai, later in Chennai and Kolkata

EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK
Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

IMPRESSIONS PUNE

EUREM
Energy Efficiency Specialist
licensed for India

INDO-GERMAN AHK
Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

IMPRESSIONS PUNE

EUREM
Energy Efficiency Specialist
licensed for India

INDO-GERMAN AHK
Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

IMPRESSIONS PUNE

EUREM
Energy Efficiency Specialist
licensed for India

INDO-GERMAN AHK
Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

CONTACTS

Mumbai	harshad.phadnis@indo-german.com
Delhi	sumati@indo-german.com; amit.narula@indo-german.com
Kolkata	rupashri.ghosh@indo-german.com
Chennai	chennai@indo-german.com
Bangalore	bangalore@indo-german.com
Pune	aadishree.jamkhedkar@indo-german.com
EUREM-websites	http://indien.ahk.de/training/eurem/ http://in.eurem.net

EUREM Energy Efficiency Specialist licensed for India

INDO-GERMAN AHK

Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

1956-2016 | Always yours

EUREM
Energy Efficiency Specialist
licensed for India

PROUD TO SAVE

EUREM
Energy Efficiency Specialist
licensed for India

INDO-GERMAN AHK
Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bangalore · Pune · Düsseldorf

1956-2016 | Always yours

Supported by:
Federal Ministry of Economics and Energy
on the basis of a decision by the German Bundestag