

**Final Report**  
**for Assessment of Databases in 19 organizations**  
**working in Renewable Energy sector**

Client: Deutsche Gesellschaft fuer Internationale Zusammenarbeit  
(GIZ) GmbH

Implementation Agency: Risalat Consultants International FZE

Location: 19 different organizations in Kabul City

Reported by: R & D Department  
Risalat Consultants International FZE

Summary list of organizations visited and assessed

No.	Organization	Location	Date Visited
1	RED	Kabul	04-10-15
2	DABS	Kabul	11-10-15
3	MEW	Kabul	11-10-15
4	AEIC	Kabul	11-10-15
5	MRRD	Kabul	12-10-15
6	ANSA	Kabul	13-10-15
7	BORDA	Kabul	14-10-15
8	Mercy Corps	Kabul	14-10-15
9	GERES	Kabul	15-10-15
10	HARAKAT	Kabul	17-10-15

11	UNEP	Kabul	17-10-15
12	The Aga Khan Foundation	Kabul	18-10-15
13	State Corps	Kabul	18-10-15
14	MEW(VTC)	Kabul	18-10-15
15	ICE/ADB/ME	Kabul	19-10-15
16	JICA	Kabul	20-10-15
17	World Bank	Kabul	20-10-15
18	NEPA	Kabul	20-10-15
19	USAID	Kabul	22-10-15

## Preface

This document provides details on the overall delivery of the Database Assessments of 19 different organizations working in the Renewable Energy sector, conducted by Risalat Consultants International in Kabul. The assignment was conducted over one month.

The program was delivered as a result of an agreement between Risalat and GIZ for undertaking the assessment at GIZ indicated organizations with ground transportation to be compensated by GIZ.

## Implementing Organization

Risalat Consultants International FZE is Afghanistan's premier management consulting firm, also registered with the government of UAE, which offers a wide range of different services to a diverse clientele from public sector organizations to private companies to national and international NGOs etc. Founded by a team of highly skilled Management Science experts, Risalat's services are available in different provinces all over the country in addition to programs conducted in different other countries of the region and beyond.

Risalat works closely with its client organizations in developing solutions that can show direction, enhance organizational effectiveness and build the capability of people through offering practical tools and enabling implementation. It always offers the latest and up to date methodologies, concepts, industry best practices and the appropriate benchmarks in executing its clients' assignments. Risalat believes in what it offers to its clients as a real solution that can certainly lead to results in organizational effectiveness and performance enhancement.

## Program Summary

The assignment on hand included visiting of 19 different organizations which are either working in the Renewable Energy sector or have any affiliation with such an organization.

The consultants assigned by Risalat had developed specific question and for the assessment which were asked from the contact persons in the target organizations. Along with the interview questions, the consultant would observe and use the system available in the target organizations in order to assess the usability, functionality, ease of use and overall performance of the database being used in these firms.

## Assessment Timings

The daily timings of the assessments were not fixed. They would be decided on the basis of agreement and coordination with the target organizations and availability of the concerned staff.

## Assessment Consultant

The assessments were conducted by one of Risalat's experienced and qualified database experts who has several years of experience in designing developing, monitoring and troubleshooting of small and large databases over a variety of platforms from MS Access to Oracle 10 G.

## Assessment Findings

The following are findings of the assessment from the target organizations listed in order of dates of visits. With every organization there is a list of facilities they already have and the problems they currently face with the database they are using (or lack thereof). Also listed are the suggestions every organization had for improvement of the situation at their end.

After this bulk of information, there is a summary list of Risalat's suggestions for the overall RE sector databases.

Date/ Organization	Person Interviewed	Database System	Data Collection
04-10-15 RED	Mr. Moh Asif Ibrahimi Solar Energy Specialist	Has RE database system developed by MIDS: - It is one year old - MIDS still helps in usage if needed - No maintenance provided	Collects data from other organizations by emails or by official letters
<p>Problems:</p> <ul style="list-style-type: none"> <li>- The system doesn't have all related data (incomplete),</li> <li>- Can't search some places by map (due to misspellings)</li> <li>- Has only one type of user</li> <li>- No access levels</li> <li>- Weak password</li> <li>- Can't search by date</li> </ul> <p>Suggestions:</p> <ul style="list-style-type: none"> <li>- They want to have a centralized database system which is accessible to all organizations working in RE where they can register every project in RE after confirmation by RED.</li> <li>- The centralized system should provide access levels for each organization to be set by RED.</li> </ul>			
11-10-15 DABS	Mr. Waheedullah Sabawoon DABS	<ul style="list-style-type: none"> <li>- Have a database system for all</li> <li>- DABS project.</li> <li>- Store data for renewable energy in the general DABS database.</li> <li>- There is no any specific database for storing renewable projects.</li> <li>- Agree with having a central database system</li> </ul>	<ul style="list-style-type: none"> <li>- Share project reports by</li> <li>- email or official letter.</li> <li>- IT department of DABS</li> <li>- developed this system</li> </ul>
<p>Problems:</p> <ul style="list-style-type: none"> <li>- They can generate reports about renewable energy from the system manually.</li> <li>- Can't search specific project from the whole system</li> </ul> <p>Suggestions:</p> <ul style="list-style-type: none"> <li>- User access level should be provide by the system</li> <li>- All data should not be visible for public</li> </ul>			

11-10-15 MEW	Mr. Mohammad Fahim Sediqi Database Managers	<ul style="list-style-type: none"> <li>- Don't have any database system</li> <li>- Use excel files to store project data</li> <li>- Agree to have a central database</li> </ul>	Get data by sending official reports and receive data about project in meetings. Capture data from all province by official letter.
<b>Problems:</b> <ul style="list-style-type: none"> <li>- Don't have any renewable energy project and it is not related to energy program directorate department.</li> </ul>			
11-10-15 AEIC	Mr. Mohammad Shah Omar Afghan Energy Information Center	<ul style="list-style-type: none"> <li>- Have an energy database system</li> <li>- No data about renewable energy</li> <li>- Date is not updated since 2012</li> </ul>	Data is collected by receiving emails and official letters
<b>Problems:</b> <ul style="list-style-type: none"> <li>- This system is limited it does not have any data about renewable energy and there is no update data since 2012.</li> <li>- Limited staffs caused that they can't update the database.</li> <li>- Suggestions: They want to add new features and improve the system if GIZ support them.</li> </ul>			
12-10-15 MRRD	Mr. Sultan Ali Javid Head of ASERD	<ul style="list-style-type: none"> <li>- Don't have a database system in ASERD department but using excel file.</li> <li>- MRRD have database system that store all projects data.</li> <li>- Agree to have a central database system</li> </ul>	Share data by sending emails and official letters. Celebrate by email with province and rural area.
<b>Problems:</b> <ul style="list-style-type: none"> <li>- ASERD department don't have access to MIS of MRRD but they store projects data in excel file (duplicate data)</li> </ul> <b>Suggestions:</b> <ul style="list-style-type: none"> <li>- All data should share between MRRD and MEW and MEW and check a project and confirm that it should start immediately (It will not waste the time for receiving confirmation from MEW part).</li> <li>- Needs for the energy should assess and analyze in every province and districts then share for other organizations throw this central information system.</li> <li>- Find the potential area and assess which energy works better.</li> </ul>			
13-10-15 ANSA	Mr. Mujiburahman Khater Technical Deputy Director General	<ul style="list-style-type: none"> <li>- Have database system for storing standards local</li> <li>- Agree and appreciate to have a central database</li> </ul>	Share standards and codes manually

Problems:

- Some organizations may have database system but if anyone need data should search multiple places.
- It is very important that who manage and control `this system.

Suggestions:

- Our local database should link to central database system (don't update data for both), once we update our local system it should automatically update the central database system
- Electronic website for our products (standards, codes, certifications), we can sell our product.
- People can find every standards and codes from anywhere no need to come to our office

- System should have a feedback place users can add which standards they need, how much they use from existence standards.
- All people can access standards and use them.
- User's level access should define in the system.
- System should support online conference and video call

14-10-15 BORDA	Mr. Hadi Adeli Biogas Project Assistant	<ul style="list-style-type: none"> <li>- Don't have database system</li> <li>- Use excel files and portent to share data between their colleagues.</li> <li>- Also use Dev Tracker system.</li> <li>-Agree to have and use central database system</li> </ul>	-Use share folders and excel files to share data between organizations and their colleagues in different branch.
-------------------	---	---	--

Problems:

- Don't know any other organization which work in Biogas field.

Suggestions:

- Central system should have awareness for using Biogas and also provide information and advantages of Biogas.

14-10-15 Mercy Corps	Mr. Peter Stevenson Director of Programs Energy & Natural Resource	<ul style="list-style-type: none"> <li>-Have a complete database system</li> <li>-Agree to have a central database</li> </ul>	Share data by emails
----------------------------	---	---	----------------------

<p>Problems:</p> <ul style="list-style-type: none"> <li>- Don't have access to all energy related data.</li> </ul> <p>Suggestions:</p> <ul style="list-style-type: none"> <li>- Don't want to link their system with central database system instead they want to enter the project information in the central database system.</li> <li>- Want to have information about all energy industries in the country.</li> <li>- Need to know how many people use generators, gas.. for lighting</li> <li>- System should have all energy policies, documents and standards, law, current news and new technologies for easy access.</li> <li>- Have information about people how import and build equipment and which one is certified by ANSA.</li> </ul>			
15-10-15 Geres	Mr. Mohammad Raiz Ramin Technical Coordinator	<ul style="list-style-type: none"> <li>- Use excel files for storing data</li> <li>- Want to have central database system</li> </ul>	Share data by emails and official letter
<p>Problems:</p> <ul style="list-style-type: none"> <li>- Agree to use central database system if MEW want use.</li> </ul> <p>Suggestions:</p> <ul style="list-style-type: none"> <li>- They will share their suggestion in the workshop phase.</li> </ul>			
17-10-15 HARAKAT	Mr. Jawad Joya Director	<ul style="list-style-type: none"> <li>-Don't have a database system</li> <li>-Agree to have a central database system</li> </ul>	Share information in meetings
<p>Problems:</p> <ul style="list-style-type: none"> <li>- How manage and control the central database system.</li> </ul> <p>Suggestions:</p> <ul style="list-style-type: none"> <li>- Database should be general and users can write feedback and comments that we can help them</li> <li>- It should acts as an energy information center.</li> <li>- It includes information about private investment (how invest, guidance).</li> <li>- Renewable energy one stop shop would be a perfect name for the system.</li> <li>- Accuracy of data is important</li> <li>- System support national languages</li> <li>- Look to other similar website design</li> <li>- List of all energy organizations are included in the system</li> </ul>			
17-10-15 UNEP	Mr. Andrew Marton Energy and engineering program manager	<ul style="list-style-type: none"> <li>- Have system and website</li> <li>- Agree to have a central database system</li> </ul>	Share data by emails.

Problems:

- What organizations is after the system

Suggestions:

- The system should not be just a database it is better to have a platform ( information center)
- Include both government partner and industries.
- Should have a good search engine to find specific information
- Include various level of interest
- Have multiple language
- Look to other portals(websites) in the world
- System should have both data and solutions which solved by others
- Easy to change the design
- Use the system with smartphone
- Link to climate change projects

18-10-15 Aga khan Foundation	Mr. Sayed Asef Sarwari National RE and Haydro Power Coordinator	- Have general database system - Don't have specific database system for energy. - Use excel files. -Agree to have a central database system	- Share data with renewable energy by emails. - Receive the update data from other branch by emails.
------------------------------------	---	---	---

Problems:

- Didn't have good relationship with others in the energy part.

Suggestions:

- Put their technical solutions on the system which they already solved.
- Establish a better relationship with energy sectors

18-10-15 State Corps	Mr. Baktash Karimi Quality Control Manager	-Use excel sheet for storing and tracking the projects -Agree with the central database system	Share data with organizations by email and official letters.
-------------------------	--	---	--

Problems: no  
Suggestions: no

18-10-15 MEW(VTC)	Mr. Ahmad Javid Ghanizada Energy Advisor	- Agree and appreciate having a central database system	
----------------------	--	---	--



Problems:

- MEW don't have a central database system and don't know the state of energy in the country.
- AEIC don't have update data

Suggestion:

- MEW should know everything about energy should access to all data about energy
- MEW should find what potential exist and where
- Data should be on cloud and update
- MEW can confirm the accuracy of data
- Private organizations have also access to data
- Improve AEIC or build a separate system
- MEW will force the private sector to update their data in the system because they have to take license.
- System have data about all resources in every place.
- Organization can decide according data in the system which place is better for investment.
- Develop this system in such a way that can add the water sector easily.

19-10-15 ICE/ADB /ME	Mr. Hashim Coordinator	<ul style="list-style-type: none"> <li>- Use excel file for storing all energy data and also have a website to make data available for public.</li> <li>- Update the website data every 3 months.</li> <li>- Agree to have a central database system</li> </ul>	Receive update data in meetings and by emails.
----------------------------	---------------------------	---	--

Problems:

- Have all data (master plans of different technologies, resources, estimated need, and information about all province, policies and laws) but all in excel file.

Suggestions:

- Improve ICE system and there is no need to develop another system.
- ICE committee help in developing the system and have all update data.

20-10-15 JICA	Mr. Shigeki Fukuda Senior Deputy Resident Representative	-No database system in Energy	Don't work on the energy part
------------------	---	-------------------------------	-------------------------------

Problems: Not on energy sector

Suggestion:  
Developing a database system in water sector by the name HYMEP(Hydro-Meteorological Information Management) and this would be a data center in water sector

20-10-15 World Bank	Ms. Afsana Afshar Power Engineer	Have Internal database System. Do not have a separate database system of energy. Agree to have a central database system.	Share project reports by email or official letter
<p>Problems: World Bank decided to support AEIC to reactive their database system as it was before, and they are not eager to improve AEIC (add new features like have the RE part). World Bank want to become sure that don't have a duplicate system if GIZ want to develop any new system in energy sector.</p> <p>Suggestions: Agree with having a central database system and the system should also support these features focus more on renewable energy :</p> <ul style="list-style-type: none"> <li>- Resource mapping (Where we have which resources)</li> <li>- Effect of energy in different places( which one is better to use)</li> <li>- Have the capacity of different places</li> </ul>			
20-10-15 NEPA	Eng. Ghulam Mohammad Malikyar DDG DM	Use excel sheet for storing data and tracking energy project focus on renewable energy. Agree to have and eager to support central system	Collect numbers about energy as reports and share with other organizations via official letter.
<p>Problems: None</p> <p>Suggestions:</p> <ul style="list-style-type: none"> <li>- Figure out which energy is efficient in which place.</li> <li>- We should aware people to use renewable energy and share information with other organizations.</li> </ul>			
22-10-15 USAID	Mr. Kevin Peters Project Manager- Water and Energy	- Use excel file for storing the energy projects.	Share data y email and official documents.

#### Problems:

- If develop a separate database system what would happen with AEIC and there will be a duplication.

#### Suggestions:

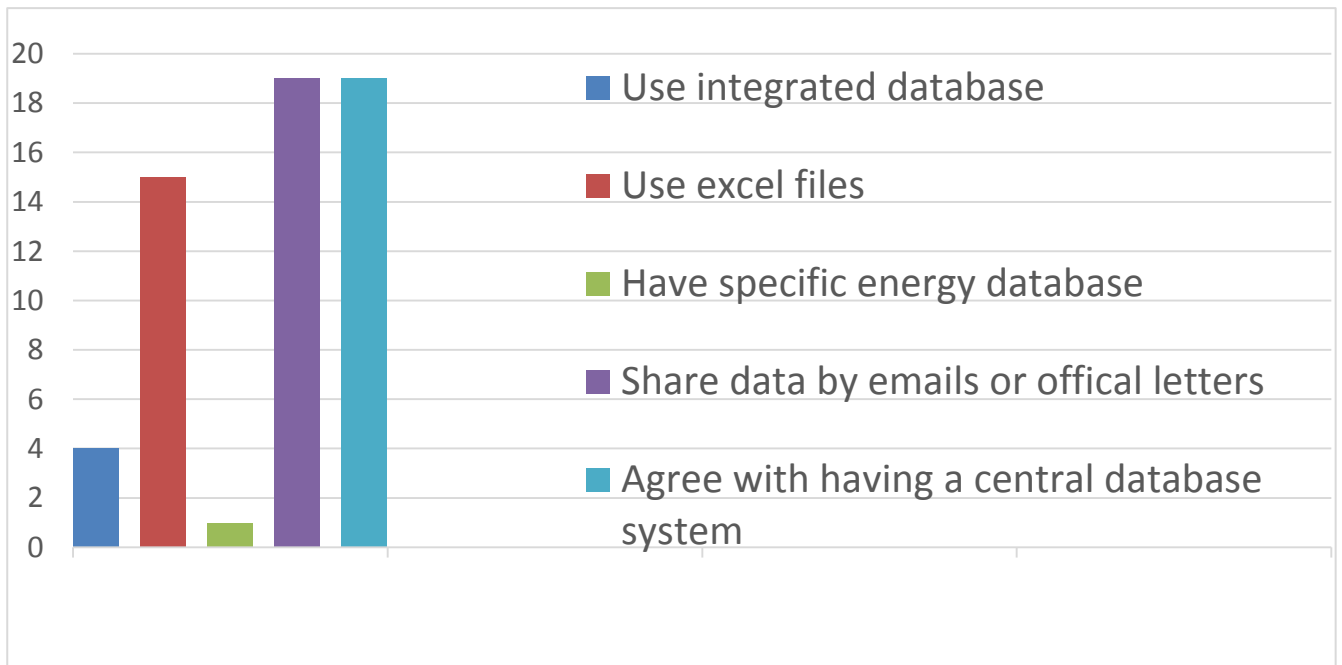
- It is better to improve AEIC
- System should include Links of all energy sectors, opportunities.
- It have also a blog are and users can write comments, count visitors of the system.
- Data confidentially is very important and should consider in the system.
- All partners can assesses meeting and schedules.
- Include different kind of energies and recognize lands for implementing energy projects.
- This system could establish a business.
- MEW can charge organizations use this system.
- Store information about equipment which would be use by organization implementing projects.
- Data shows in a structure way on the system.

### Summary of assessment

- Most organizations do not have any database system for storing and managing their organization data and use traditional excel files, word document and other documents.
- No organization has a specific database system for storing and managing the energy data.
- All organizations happy with having a central database system and really appreciate this idea.
- About 50% of organizations want to have more than a database system, portal or energy information center.
- There are two different ideas for having such system.
  1. The central database system provide access for each organization involved and enable them to put their information in the system and update whenever they have new information.
  2. The central database system should link to organizations which already have local databases and there would be no need to update both when having new information, once the local system of each organization is updated it also will update the central database system.
- All AEIC data is related to DABS and there is no data about other organizations project.

- Some organizations want to work and improve AEIC or IEC instead of developing a new system.
- ICE has lots of energy data which is very important and makes the system powerful.

- There are 19 organizations interviewed and this chart shows their status:



AEIC is the energy information center in Afghanistan, this department is active under authorization of Da Afghanistan Brishna Sherkat and located in ministry of energy and water, AEIC has 5 employees and lack of employees caused that they did not have the update data since 2012. Still some organizations like MEW, World Bank, AEIC and USAID want to reactive AEIC and improve AEIC instead of developing a new database system. MEW want to have a central database system for storing all energy related information and they really need such this system like this all the organizations which we visit they are eager to have and use this system.

This department is working for DABS not for Ministry of Energy and Water, they store power plants and imports, maps of demand and energy production data, we can integrate both AEIC system (technology used MYSQL database server and PHP language) and central database system. AEIC have not sufficient human resource and place but they have an IT person that control the servers and doing the IT related tasks.

Before when AEIC database system was active and projects were stored there, all organizations send their data through email and papers to AEIC department and they store them in the database system. Like AEIC, RED and IEC also have database system for storing energy data, RED store all data about renewable energy and IEC has bunch of data (power plans, needs, resources...).

There is a point to be considered before developing the concept of this system is to decide who will manage and maintenance this system that every organization can trust and use this system.

Every organizations which we visit want to have a central database system including rural areas, providing access to the system is a better an easier way of connecting all organizations to the central database system instead of linking other system because not all organization have database systems.

## Challenges

The only challenge we faced during the assessment process was coordination with target organizations. However, that too, with cooperation from GIZ, was improved a lot towards the end of the assignment.

## Suggestions

After analyzing the results of the assessment, we reach a conclusion that there are two main goals behind having a database system:

- A) Having all accurate and updated data in one place which supports MEW and all other organizations
- B) The existence of an Energy information center.

Towards that end, we recommend the following to be considered:

1. It is important to have a central database system but just having a database would not help other organizations, instead if think of much powerful system that include any kind of information related to energy it would be interested for any private sector and aware them that where to invest and find any information that they need (where to invest, from whom buy equipment, who solve the process of starting the business, which law exist, which standards should use...).
2. The system should include these information:
  - a) List of all organizations involve in energy
  - b) List of all organizations produce or import energy equipment
  - c) Energy need in all the country
  - d) Resource mapping (where which resource exist)
  - e) Number how many people use energy which is not good for environment( generators, gas, ...)
  - f) Energy news, laws, policies, standards and other documents
  - g) Data and solutions of each organization
  - h) All meetings and schedules

- i) Number of people use and agree with specific energy implemented for them
3. The system should support multiple languages (Dari, Pushto and English)
  4. There are two ideas for developing this central database system:
    - a. Improve AEIC because it is already build, need to change the design, add new features and put everything on the cloud to be accessible for all organizations, it would cost less and may take less time. but
    - b. The concept behind AEIC system for now is to store all data related to DABS and it is a basic system, so if this system is for every one this problem should solve and the concepts behind these two systems are different in this case developing a new system would be easier than improving this.
  5. Linking organizations database system is not an efficient way because:
    - a. Not all organizations have database system, they must build a local database system for themselves to link with the central database system.
    - b. Each organization may use specific technologies (programming language C#, PHP, Java, Python...) for their local system and this will make difficult or impossible the linking process.
  6. The central database system should provide access for each organization to update their information. Consider two points:
    - a. Provide a specific page (Facebook page) for every organization that can put all data regarding their organization there and be accessible to all (organization specific web pages).
    - b. Provide a key for updating the projects information in the system.
  7. User access level (data confidentiality) should be considered who have access to which information.
  8. Security of this system is very important (implement security mechanism in development) because this would be the one energy information center some unauthorized may want to access to the system or organizations should not lose the trust.

#### Workshop comments:

There were some comments given during the final orientation:

1. There should be a committee for monitoring the system and checking for the accuracy of data.
2. The security of the system is so important because all data is one place at it should be considered.
3. All the organizations' databases should be linked to the central database system.