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Report on

VISITS FOR LAUNCHING
UNIDO INTERNATIONAL CENTRE
FOR HYDROGEN ENERGY AND TECHNOLOGY
(UNIDO-ICHET)

prepared for

UNIDO
United Nations Industrial Development Organization
Vienna International Centre
A-1400 Vienna, Austria

by

Consultant: T. Nejat Veziroğlu
Clean Energy Research Institute
University of Miami
Coral Gables, Florida 33124, U.S.A.

May 1992

Delivered off: Mr. Toham, ICT/ED/NT

Report on

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UNIDO INTERNATIONAL CENTRE
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Report on
VISITS FOR LAUNCHING
UNIDO INTERNATIONAL CENTRE
FOR HYDROGEN ENERGY AND TECHNOLOGY (UNIDO-ICHET)

ABSTRACT

United Nations Industrial Development Organization (UNIDO) has taken a preliminary decision to establish a UNIDO International Centre for Hydrogen Energy and Technology (UNIDO-ICHET), and has commissioned Dr. T. Nejat Veziroglu to visit the pertinent divisions of the United Nations in New York and the World Bank in Washington, D.C. in order to brief the officials and assess the degree of support (both financial and otherwise) for such a centre, and also to visit with the Turkish Government officials in Ankara and Istanbul to find out if Turkey would like to be the host country for the Centre, and look over possible sites. The visits have now been completed, and the results are encouraging. The World Bank and the Global Environment Facility (GEF) officials expressed their opinions indicating that the proposed goals of the Centre and the GEF mission coincided, and as such, the Centre deserved support. Deputy Prime Minister of Turkey, Professor Dr. Erdal Inonu said that Turkey would be very happy to host the Centre, and in due course, a letter should be forwarded to UNIDO expressing the strong interest of the Turkish Government. Also an attractive site has been identified in Istanbul for the Centre.

1. INTRODUCTION

After T. Nejat Veziroglu submitted a report entitled *Hydrogen Energy Initiation in Developing Countries* to the United Nations Industrial Development Organization (UNIDO), Vienna International Centre, A-1400 Vienna, Austria, in October 1991, UNIDO has made a preliminary decision to establish a UNIDO International Centre for Hydrogen Energy and Technology, and requested Dr. Veziroglu to visit the possible funding organizations in New York and Washington, D.C. and the possible host country, Turkey, in order to gauge the interests of funding organizations and Turkey in the establishment and operation of such a Centre, and to look over possible sites. This report is on the visits undertaken for this purpose.

On the way to Turkey, Dr. Veziroglu stopped in Vienna to visit the UNIDO headquarters. Accordingly the report is divided into several sections covering the cities visited in chronological order, viz., visits to New York, Washington, D.C., Vienna, Istanbul, Ankara and Istanbul again, and other pertinent information.

2. VISIT TO NEW YORK

Wednesday, 15 April 1992

9:00 A.M. - 9:30 A.M.: Visited UNIDO New York Office, met with Mr. Steve Holloway, Director, and Mr. Hassan H. Bahlouli, Deputy Director, and was briefed about the appointments of the day (It should be mentioned that the Bureau people were very helpful in setting up the appointments, and offering office space and office help).

9:30 A.M. - 10:30 A.M.: Visited the United Nations Department of Technical Cooperation for Development, Natural Resources and Energy Division and gave a slide presentation about the proposed Centre and its goals. The meeting was attended by Ms. Dunja Pastizzi-Ferencic, Director of the Division and the following people from her division: Messrs. Carlos Nones-Sucre, Yoshiaki Aamakawa, Lowell L. Fianders, Derek Lovejoy, Dirk Pilari, Walter Shearer and Michael Willingham. The presentation was well received. Participants thought the idea was good and timely. They mentioned that their organization does not have funds to support such a Center, however, they would support the establishment of such a Centre in principle.

10:45 A.M. - 11:30 A.M.: Met with Mr. David Wright, United Nations Development Programme, Bureau for Programme Policy and Evaluation, Global Environment Facility, and briefed him about the project. Mr. Wright, in turn, gave information about the Global Environment Facility (GEF), indicating that it has funds of \$1.5 billion to be used for the remediation of environmental problems and thought that the goals of the proposed Centre were much in line with the GEF mission, and suggested that Turkey apply to GEF for funds for the Centre.

11:45 A.M. - 12:15 P.M.: Visited with Dr. Charles McNeil, GEF Operations Coordinator, United Nations Development Programme, and briefed him about the project. Dr. McNeil also agreed that the Centre's goals were in keeping with the GEF mission and informed Dr. Veziroglu that it would be useful to visit the United Nations Office in Ankara and sent a fax letter to Edmund Cain, UNDP Resident Representative in Ankara, informing him of the forthcoming visit of Dr. Veziroglu.

2:00 P.M. - 2:15 P.M.: Had a telephone conversation with Dr. Üner Kirdar, UNDP Director of External Relations and Governing Secretariat, and briefed him about the project. Dr. Kirdar thought it was a worthy project and promised his support.

3:00 P.M. - 4:00 P.M.: Met with His Excellency Mustafa Akçin, the Turkish Ambassador to the United Nations, and briefed him about the proposed Centre. The Ambassador mentioned that he would support it in the United Nations and inform the Turkish government of Dr. Veziroglu's forthcoming visit to Ankara. He also thought that it may be a good idea for the Turkish Delegation to the forthcoming Earth Summit Meeting in Rio de Janeiro, Brazil, to inform the Earth Summit about the project and to lobby for funding from the Earth Summit Organizations and also from the participating countries at the meeting.

3. VISIT TO WASHINGTON, D.C.

Thursday, 16 April 1992

8:15 A.M. - 8:45 A.M. Visited with Dr. Atilla Karaosmanoglu, Associate Administrator, World Bank, and briefed him about the project. Dr. Karaosmanoglu's secretary made various appointments with the people involved in energy and/or environmental projects in the World Bank.

9:00 A.M. - 9:30 A.M.: Visited with Mr. Anthony A. Churchill, Director, Industry and Energy, The World Bank, and briefed him about the project. Mr. Churchill thought that the project was worthwhile.

9:45 A.M. - 10:15 A.M.: Visited with Mr. Charles Feinstein, Operations Officer, Global Environmental Facility, the World Bank, and briefed him about the project. Mr Feinstein agreed that the goals of the Centre were very much in tune with the GEF mission, and suggested that Turkey should apply to GEF for funding.

10:30 A.M. - 11:30 A.M.: Visited with Ms. Loretta Schaeffer, Program Manager, Asia Alternate Energy Unit, Asia Technical Department, the World Bank, and briefed her about the project. Ms. Schaeffer stated that her job was to put together financing for environmentally friendly energy projects, gave an example of a hydrogen project in South China where hydrogen would be used for farm equipment, and thought the Centre project deserved support.

12:00 Noon - 2:00 P.M.: Had a luncheon meeting with Dr. Karaosmanoglu. During the meeting, Dr. Karaosmanoglu mentioned that we could tell the Turkish Government that the World Bank would do its best to help find funding for the proposed Centre.

2:30 P.M. - 3:00 P.M.: Visited with Mr. Daniel Ritchie, Director, Asia Technical Department, the World Bank, and briefed him about the proposed Centre and its aims. Mr. Ritchie mentioned that the Centre deserved support and they would do their best to help. He also suggested that Dr. Veziroglu should visit the World Bank again and make a presentation to a group of officials about the merits of hydrogen and the proposed Centre.

4. ADDITIONAL INFORMATION

Dr. Veziroglu, on his return to Miami, sent the copies of the following material as additional information to the persons visited or to their superiors:

1. The Informal UNIDO Aide-Memoire for the establishment of an International Centre for Hydrogen Energy and Technology.
2. The report entitled "Hydrogen Energy Initiation in Developing Countries" prepared for UNIDO, which recommends the establishment of a UNIDO

International Center for Hydrogen Energy and Technology.

3. The paper entitled "Hydrogen: The Wonder Fuel," which elaborates on the unique and unmatched properties of hydrogen and compares it with conventional fuels.
4. A copy of the International Journal of Hydrogen Energy, which Dr. Veziroglu edits and which is in its 17th year.
5. A copy of the International Journal of Energy-Environment-Economics, which Dr. Veziroglu edits and started publication recently.

Copies of the cover letters are herewith included in Appendix A.

5. **VISIT TO VIENNA**

Sunday, 26 April 1992

His Excellency Mr. Ayhan Kamel, the Turkish Ambassador in Vienna, gave a dinner in order to bring together the persons involved in the establishment of the proposed centre. In addition to the Ambassador, the dinner was attended by Mr. Akşit Kayalar (UNIDO), Mr. Berk Koçer (UNIDO) Mr. Can Soysal (Turkish Embassy), Ms. Şule Soysal (Turkish Embassy), Mr. George Tabah (UNIDO) Mr. K.Venkataraman (UNIDO), and Dr. T. Nejat Veziroglu (University of Miami). Ambassador Kamel mentioned that he would do his best as a conduit between the Turkish government and UNIDO to speed up the realization of the Centre. All those present at the dinner mentioned that the idea was a good one, and that they would support the establishment of the Centre.

Monday, 27 April 1992

9:00 A.M. - 12:00 Noon: Visited UNIDO Headquarters and briefed Mr. K. Venkataraman and Mr. George Tabah about the meetings in New York and Washington, D.C., obtained a copy of the UNIDO letter forwarded to the Turkish Government through the Turkish Embassy in Vienna, and was given a suggested draft letter to be sent by the Turkish Government to UNIDO indicating their willingness to host the Centre.

12:00 Noon - 12:30 P.M.: Visited with Mr. Berk Koçer of UNIDO, and briefed him about the meetings in New York and Washington, D.C., and the forthcoming visit to Turkey.

12:30 P.M. - 1:00 P.M.: Visited with Mr. Akşit Kayalar, Director, External Relations Division and Secretary, Secretariat of Policy Making Organizations, UNIDO, and briefed him about the meetings in New York and Washington, D.C., and the forthcoming visit to Turkey. Mr. Kayalar gave useful tips for the meetings in Turkey and for the procedure to be followed.

6. FIRST VISIT TO ISTANBUL

Tuesday, 28 April 1992

9:00 A.M. - 12:00 NOON: Visited the Municipalities in Istanbul, and studied the maps and plans of government owned lands, which could be used for the proposed Centre.

1:00 P.M. - 4:00 P.M.: Visited various government owned sites, which could be used for the proposed Centre, and gathered information.

5:00 P.M. - 6:00 P.M.: Visited with Mr. Hayri Kozakcioglu, Governor of Istanbul, and briefed him about the Centre and its goals. The Governor was very happy to hear that there would be an international addition to the scientific life of Istanbul, which already is host to several universities and R&D centers, and added that he supported the Centre and we could call on him anytime we needed his help.

7. VISIT TO ANKARA

Wednesday, 29 April 1992

10:00 A.M. - 11:00 A.M.: Visited the United Nations Office in Ankara, and met with Dr. Kemal Güleç, Science and Technology Department, Social Planning, Turkish State Planning Organization, Mr. Adalat Khan, UNDP Deputy Resident Representative, Mr. Philippe Duamelle, UNDP Programme Officer, and Melih Türeli, UNIDO Senior Programme Assistant; briefed them about the proposed Centre and its goals. In reply they stated that the proposed Centre deserved support, and that the UNDP funds for Turkey were all encumbered through 1994.

12:00 Noon - 12:30 P.M.: Visited Necdet Seçkinöz, Under-Secretary of the Prime Minister Süleyman Demirel (in place of the Prime Minister, who was visiting the Central Asian Republics), briefed him about the project. Mr. Seçkinöz said that the Prime Minister knew about the project (through the October 1991 Report sent to him earlier) and was strongly supportive of it. Mr. Seçkinöz asked that he be given a list of the actions needed to be taken, together with suggested drafts of any letters required.

3:00 P.M. - 3:30 P.M.: Visited Deputy Prime Minister Professor Dr. Erdol İnönü (who is in charge of all the Scientific Activities in Turkey), and briefed him about the project. Dr. İnönü stated that he read the October 1991 report sent to him earlier and he naturally supported the Centre.

Presented Dr. İnönü with a Preliminary Organization of the Centre, a list of Building and Land Requirements, a list of Capital Expenditures required, and a list of Annual Operating Expenses. These are attached in Appendix B. As can be seen from the Appendix, it is estimated that the Centre needs 600,000 m² land, about \$60 million (other

than land) in capital expenditures, and about \$9 million a year in operating expenses. When mentioned that some of the land on which the Cekmece Nuclear Energy Research Institute in Istanbul stands could be given to the proposed Centre, Dr. İnönü replied that he was thinking of the same location. Dr. İnönü asked that he be given a list of the actions needed to be taken and the drafts of the letters required.

Thursday, 30 April 1992

10:00 A.M. - 11:00 A.M.: Visited with Mr. Ersin Faralyali, the Minister for Energy and Natural Resources (his Under-Secretary, Mr. Mahir Barutçu, was also present at the meeting), and briefed him about the Centre and its goals. The Minister said that they had already read the October 1991 Report sent earlier and would support the Centre. He asked if Izmir was considered as the location for the Centre. The answer was "Yes, both Izmir and Ankara were also considered, but since the Centre is international and since Istanbul has the best air connections to the rest of the World, Istanbul was chosen for the Centre." The Minister said that we could count on him for any help he could give, and that he would send a letter of support after the Prime Minister has sent the letter of intent.

3:00 P.M. - 4:00 P.M.: Talked on the telephone with Mr. M. Kamal Hussein (UNIDO Representative) and Mr. Philippe Duamelle (UNDP Programme Officer) at the U.N. Office in Ankara. Briefed Mr. Hussein about the project, and he promised his support. Mr. Duamelle requested additional information on Hydrogen Energy. They have been mailed to him in due course.

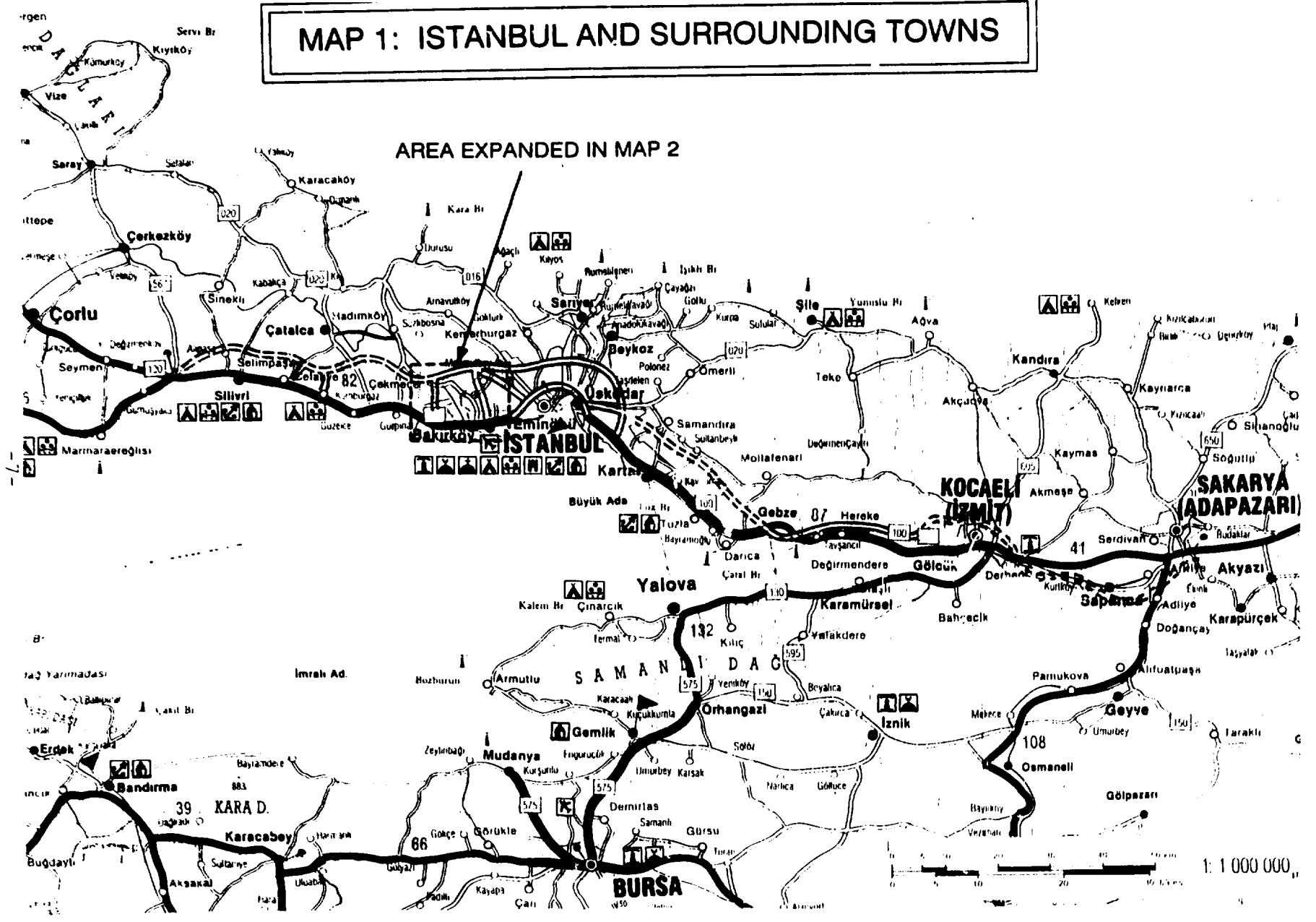
8. SITE CHOSEN

After site visits in Istanbul and discussions in Ankara with the Deputy Prime Minister, Erdal İnönü, a part of the land (about one-half), on which the Istanbul K. Cekmece Nuclear Research Centre is located, was chosen to be recommended as the site for the proposed Centre. Map 1 shows Istanbul and the surrounding towns, as well as the relative location of the region (where the recommended site is) expanded on Map 2. As can be seen from Map 1, the region is in the western outskirts of Istanbul at a distance of about 30 Kms from the centre of Istanbul.

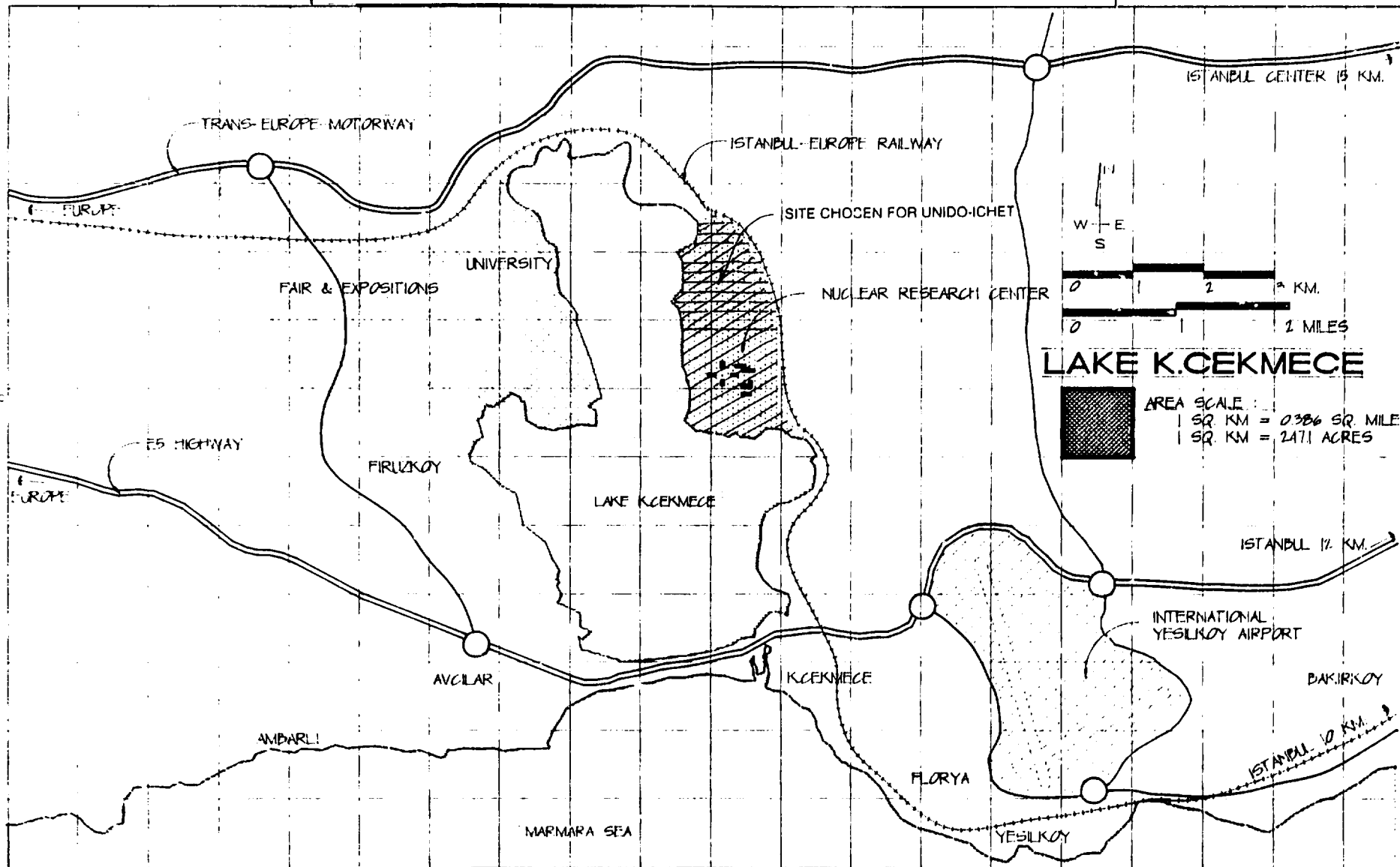
Map 2 shows the region to a larger scale. At the middle of the region is the land (shaded with red dots, diagonal black lines, and also horizontal black lines) belonging to the Istanbul K. Cekmece Nuclear Research Centre and its buildings (shaded black). The land recommended for the Centre (UNIDO-ICHET) is the northern half of this land, which is about 1.5 square kilometers. It can be seen from Map 2 that it will be surrounded by the Istanbul-Europe railroad to the East and North, by K. Cekmece lake to the West, and by the Nuclear Research Center to the South. The region includes - in addition to the Nuclear Research Center - land reserved for some educational and cultural activities. For example, the land on the opposite (Western) shores of the lake is reserved for Istanbul University expansion (or a new university), and the land to its West is reserved for fairs and expositions. It is altogether a very attractive area.

MAP 1: ISTANBUL AND SURROUNDING TOWNS

AREA EXPANDED IN MAP 2



MAP 2: LOCATION OF SITE FOR UNIDO-ICHET



The proposed UNIDO-ICHET site will have good road connections to Istanbul and Europe through the existing E 5 Istanbul-London Highway and the new European Motorway under construction. It is also close to the Istanbul International "Atatürk" Airport. The distance by road is about 10 kms.

The land belongs to the government, and as such it would be easy to transfer it or rent it to UNIDO.

9. SECOND VISIT TO ISTANBUL

Friday, 1 May 1992

Prepared the list of the actions to be taken by the Turkish Government as requested by the Deputy Prime Minister and the Under-Secretary of the Prime Minister, as well as the drafts of the suggested letters to UN-GEF and the World Bank. The suggested list of actions is as follows:

1. Send a letter of intent to UNIDO to indicate desire to host the Centre.
2. Send letters to UN-GEF and the World Bank requesting financial assistance for the Centre.
3. Inform the World Community at the World Summit in Rio de Janeiro in June 1992 that the Center is a contribution by Turkey for helping to solve the global environmental problems.
4. Lobby at the World Summit to obtain pledges of support for the Centre.

The proposed list of actions and the drafts of the suggested letters were sent to the Deputy Prime Minister and the Under-Secretary of the Prime Minister in Ankara by courier. The draft letters are appended in Appendix C.

10. CONCLUSIONS

The visits have been very productive and very encouraging. The results can be summarized as follows:

1. The Turkish Government would like to host the Centre, and will soon send a letter of intent to this effect.
2. UN-GEF and the World Bank feel that the Centre's goals coincide with their interests and missions, and as such is worthy of support.
3. Turkish Government intends to send letters both to UN-GEF and the World Bank asking for their financial support.

4. An attractive land parcel has been identified in Istanbul for the Centre.
5. Preliminary Organization of the Centre, Building and Land Requirements, and estimates of capital and operating expenses have been prepared.

APPENDIX A

INFORMATION LETTERS TO:

- 1. Mohamed El-Ashry - GEF - World Bank**
- 2. Atilla Karaosmanoglu - World Bank**
- 3. Uner Kirdar - U.N.D.P.**
- 4. Charles McNeil - G.E.F. - U.N.**
- 5. Dunja Pastizzi-Ferencic - U.N.**
- 6. Daniel Ritchie - World Bank**
- 7. David Wright - G.E.F. - U.N.**



21 April 1992

Mr. Mohamed El-Ashry
Director, Global Environment Facility
Environment Department, Room S5-029
The World Bank
1818 H Street, N.W.
Washington, D.C. 20433

Re: UNIDO International Centre for Hydrogen Energy and Technology

Dear Mr. El-Ashry:

Since you were not available last Thursday when I visited the World Bank under a UNIDO assignment, I met with your colleague, Mr. Charles Feinstein. In order to inform you about the situation as well, I am herewith enclosing the following material for you:

1. An Informal UNIDO Aide-Memoire for the establishment of an International Centre for Hydrogen Energy and Technology.
2. A report entitled "Hydrogen Energy Initiation in Developing Countries" prepared for UNIDO, which recommends the establishment of a UNIDO International Center for Hydrogen Energy and Technology.
3. A paper entitled "Hydrogen: The Wonder Fuel," which elaborates on the unique and unmatched properties of hydrogen and compares it with conventional fuels.
4. A copy of the International Journal of Hydrogen Energy, which I edit and which is in its 17th year.
5. A copy of the International Journal of Energy • Environment • Economics, which I edit and started publication recently.

I send you and Mr. Feinstein my best regards, and remain

Sincerely yours,


T. Nejat Veziroglu
Professor & Director

TNV:lw
Enclosures

cc: Dr. Atilla Karaosmanoglu

UNIVERSITY OF
Miami

April 18, 1992

Sayin Atilla Karaosmanoğlu
The World Bank, Building E, Room E1227
1818 H Street, N.W.
Washington, D.C. 20433

Re: UNIDO International Centre for Hydrogen Energy and Technology

Sayin Atilla Bey:

I would like to thank you very much for your hospitality, for arranging to meet with the people concerned, and for your suggestions and assistance regarding the subject matter project, which I strongly believe will help establish an environmentally most compatible, economical energy system and provide humankind with a higher quality of life. Please find enclosed the following additional material for you:

1. An Informal UNIDO Aide-Memoire for the establishment of an International Centre for Hydrogen Energy and Technology.
2. A report entitled "Hydrogen Energy Initiation in Developing Countries" prepared for UNIDO, which recommends the establishment of a UNIDO International Center for Hydrogen Energy and Technology.
3. A paper entitled "Hydrogen: The Wonder Fuel", which elaborates on the unique and unmatched properties of hydrogen and compares it with conventional fuels.
4. A copy of the International Journal of Hydrogen Energy, which I edit and is in its 17th year.
5. A copy of the International Journal of Energy . Environment . Economics, which I edit and started publication recently.
6. The annual report of the Clean Energy Research Institute, which I direct.

Again, I appreciate your assistance and hospitality very much, and remain

Sincerely yours,

Nejat

T. Nejat Veziroglu
Professor & Director

*Bana ayırdığınız vakit ve
misafirperverliğiniz için çok
çok teşekkür eder, gözleminizden
öperim. Miamiye bekleriz.*

TNV:eh
Enclosures

Clean Energy Research Institute
College of Engineering
PO Box 248294

Coral Gables, Florida 33124-0622

Federal Express

Dr. Üner Kırdar
330 East 33rd St., Apt. 3M
New York, N. Y. 10016

Re: UNIDO International Centre for Hydrogen Energy and Technology

Sayın Üner Bey:

It was nice talking with you over the telephone. In order to help you to assess the situation regarding the subject matter project, I am herewith enclosing the following material for you:

1. An Informal UNIDO Aide-Memoire for the establishment of an International Centre for Hydrogen Energy and Technology.
2. A report entitled "Hydrogen Energy Initiation in Developing Countries" prepared for UNIDO, which recommends the establishment of a UNIDO International Center for Hydrogen Energy and Technology.
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4. A copy of the International Journal of Hydrogen Energy, which I edit and which is in its 17th year.
5. A copy of the International Journal of Energy - Environment - Economics, which I edit and started publication recently.

I take this opportunity to thank you very much for your interest in this project and for your suggestions, and send you my best regards.

*İlgi ve tavsiyelerinize
çok çok teşekkür eder,
güçlerinizden öperim.*

TNV:lw
Enclosures

Sincerely yours,

Nejat
T. Nejat Veziroglu
Professor & Director



April 20, 1992

Dr. Charles McNeill
GEF Operations Coordinator
Arab States and Europe
United Nations Development Programme
One United Nations Plaza
New York, NY 10017

Re: UNIDO International Centre for Hydrogen Energy and Technology

Dear Dr. McNeill:

I thank you very much for your time and assistance with the subject matter proposed UNIDO Centre. In order to help you with your evaluations, I am herewith enclosing the following material for you:

1. An Informal UNIDO Aide-Memoire for the establishment of an International Centre for Hydrogen Energy and Technology.
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6. The annual report of the Clean Energy Research Institute, which I direct.

I take this opportunity to thank you very much for your interest in this project and for your assistance, and send you and your colleagues my best regards.

Sincerely yours,


T. Nejat Veziroglu
Professor & Director

TNV:eh
Enclosures

Clean Energy Research Institute
College of Engineering
P.O. Box 248294
Coral Gables, Florida 33124-0622



21 April 1992

Ms. Dunja Pastizzi-Ferencic
Director, Natural Resources and Energy Division
Department of Technical Cooperation for Development
United Nations
New York, N.Y. 10017

Re: UNIDO International Centre for Hydrogen Energy and Technology

Dear Ms. Pastizzi-Ferencic:

I thank you and your colleagues very much for your time when I visited New York last Wednesday in connection with the subject matter proposed UNIDO Centre. In order to help you with your evaluations, I am herewith enclosing the following material:

1. An Informal UNIDO Aide-Memoire for the establishment of an International Centre for Hydrogen Energy and Technology.
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I take this opportunity to thank very much you and your colleagues, Messrs. Carlos Nones-Sucré, Yoshiaki Aamakawa, Lowell L. Flanders, Derek Lovejoy, Dirk Pilari, Walter Shearer and Michael Willingham, and remain

Sincerely yours,


T. Nejat Veziroglu
Professor & Director

TNV:lw
Enclosures

Clean Energy Research Institute
College of Engineering
P.O. Box 248294
Coral Gables, Florida 33124
Tel. 305-384-4666



April 18, 1992

Mr. Daniel Ritchie
Director, Asia Technical Department
The World Bank
1818 H Street, N.W.
Washington, D.C. 20433

Re: UNIDO International Centre for Hydrogen Energy and Technology

Dear Mr. Ritchie:

I thank you very much for your time and attention to my presentation about the subject matter proposed UNIDO Centre. In order to help you with your evaluations, I am herewith enclosing the following material for you:

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6. The annual report of the Clean Energy Research Institute, which I direct.

I take this opportunity to thank you very much for your interest in this project and for your advice, and send you and your colleagues my best regards.

Sincerely yours,

A handwritten signature in black ink, appearing to read "T. Nejat Veziroglu". The signature is stylized and includes a large loop at the end.

T. Nejat Veziroglu
Professor & Director

TNV:ar
Enclosures

Clean Energy Research Institute
College of Engineering
P.O. Box 248294
Coral Gables, Florida 33124-0622
Tel: 305-284-4666



April 18, 1992

Mr. David Wright
Global Environment Facility
Bureau for Programme Policy and Evaluation
United Nations Development Programme
One United Nations Plaza
New York, NY 10017

Re: UNIDO International Centre for Hydrogen Energy and Technology

Dear Mr. Wright:

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2. A copy of the International Journal of Hydrogen Energy, which I edit and is in its 17th year.
3. A copy of the International Journal of Energy-Environment-Economics, which I edit and started publication recently.
4. The annual report of the Clean Energy Research Institute, which I direct.

I take this opportunity to thank you very much for your interest in this project and for your advice, and send you and your colleagues my best regards.

Sincerely yours,

A handwritten signature in black ink, appearing to read "T. Nejat Veziroglu". The signature is fluid and cursive, with a large loop at the end.

T. Nejat Veziroglu
Professor and Director

TNV:ar

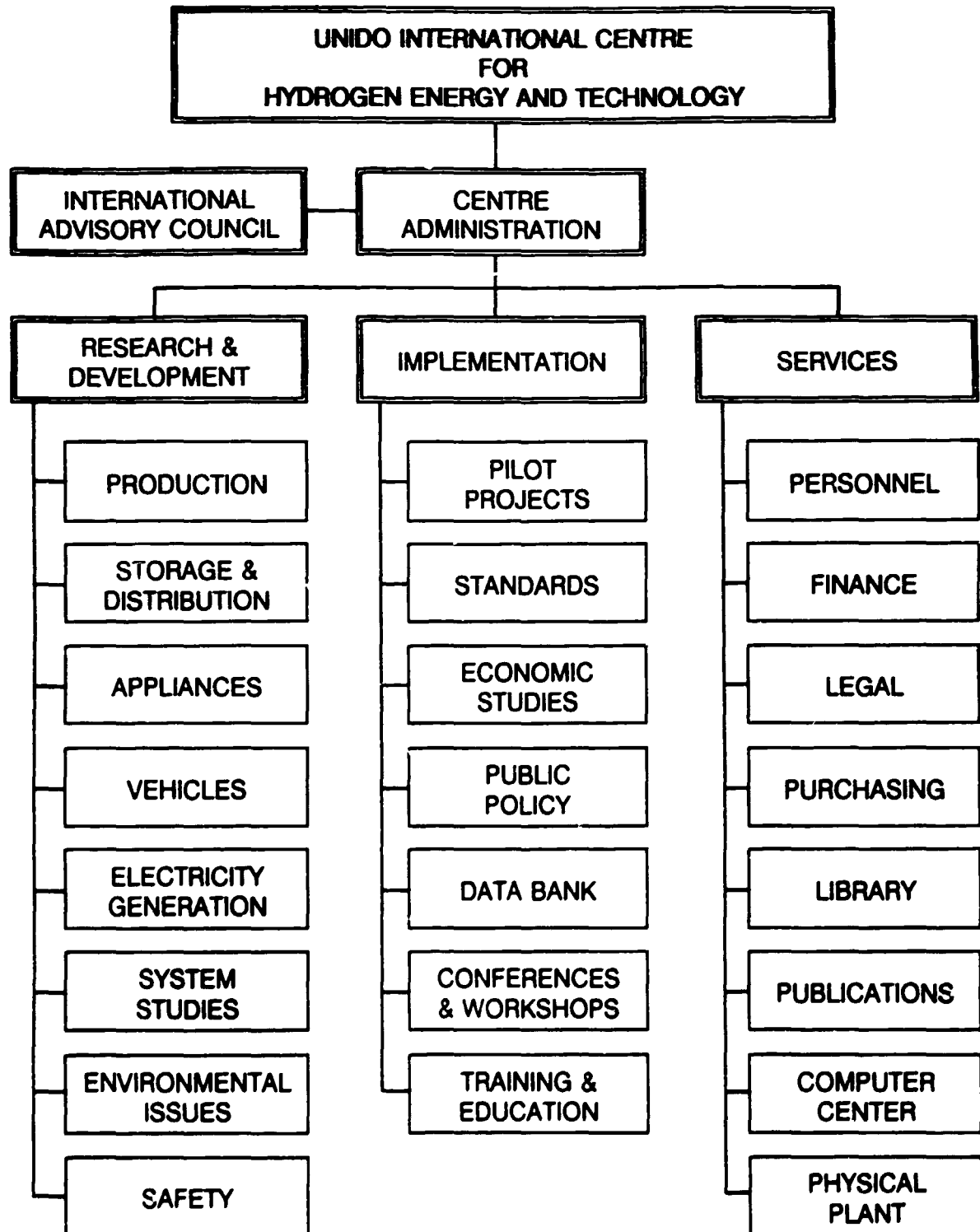
Clean Energy Research Institute
College of Engineering
P.O. Box 248294
Coral Gables, Florida 33124-0622
Tel.: 305-284-4666

APPENDIX B

PRELIMINARY ESTIMATES FOR UNIDO-ICHET:

- 1. ORGANIZATIONAL OUTLINE**
- 2. BUILDING AND LAND REQUIREMENTS**
- 3. CAPITAL EXPENSES**
- 4. ANNUAL OPERATING EXPENSES**

Preliminary Organization Outline



**UNIDO INTERNATIONAL CENTRE
FOR
HYDROGEN ENERGY AND TECHNOLOGY**

Building & Land Requirements

BUILDING	AREA (m ²)
Administration:	1,200
Research & Development Division Laboratories & Office Space:	12,000
Implementation Division Conference Saloon, Meeting Rooms, Office Space:	10,000
Services Division Physical Plant, Computer Center, Library, Office Space:	10,000
Dormitories for Visiting Scientists:	5,000
	38,200
TOTAL BUILDING SPACE:	38,200
TOTAL LAND AREA REQUIREMENT	
Parking, Recreational, etc.:	600,000 (150 Acres)

**UNIDO INTERNATIONAL CENTRE
FOR
HYDROGEN ENERGY AND TECHNOLOGY**

Capital Expenses

ITEM	AMOUNT (US\$)
Building Construction Cost: $38,200 \text{ m}^2 \times \$1,000/\text{m}^2 =$	\$38,200,000
Computer Center, Laboratory Equipment:	9,000,000
Furniture, Office Equipment:	4,000,000
Parkings, Roads, Landscaping:	9,000,000
TOTAL CAPITAL EXPENSES:	\$59,200,000

**UNIDO INTERNATIONAL CENTRE
FOR
HYDROGEN ENERGY AND TECHNOLOGY**

Annual Operating Expenses

ITEM	AMOUNT (US\$)
Administrators & professional staff 60 persons @ \$60,000/year:	3,600,000
Lab assistants & technicians 40 persons @ \$40,000/year:	1,600,000
Coordinators & secretaries 40 persons @ \$30,000/year:	1,200,000
Cleaning staff & guards 40 persons @ \$15,000/year:	600,000
Total personnel 180 employees:	7,000,000
Utilities & Supplies:	600,000
Library (books and journals):	300,000
Travel:	400,000
Repairs & Services:	400,000
Capital Equipment:	200,000
TOTAL ANNUAL OPERATIONAL EXPENSES:	\$8,900,000

APPENDIX C

**DRAFTS OF SUGGESTED LETTERS TO BE
SENT BY TURKISH GOVERNMENT TO:**

1. UNIDO
2. GEF-UN
3. WORLD BANK

15 May 1992

Mr. D.L. Siazon, Jr.
Director-General
United Nations Industrial Development Organization - UNIDO
Vienna International Centre
A-1400 Vienna, Avusturya (Austria)

Dear Mr. Director-General:

Following the letter of 10 April 1992 from Mr. A. Araoz, Deputy Director-General, Department for Industrial Promotion, Consultations and Technology, addressed to our Permanent Representative to UNIDO, H.E. Mr. Ayhan Kamel, and enclosing an informal aide-mémoire as well as a report prepared by Prof. Veziroglu for the Industrial Technology Development Division of UNIDO on hydrogen energy initiation in developing countries, the Government of Turkey has examined with interest the recommendation in that report for the establishment of an international centre for hydrogen energy and technology. Officials of the Government also had the benefit of the visit of Prof. Veziroglu, which provided an opportunity for extensive discussions on the subject.

Based on the foregoing, the Government of Turkey is interested in hosting an International Centre for Hydrogen Energy and Technology, and requests UNIDO for assistance in the promotion of such a centre as a UNIDO project with special attention to industrial initiation and application. The Government of Turkey is willing to provide \$100,000 towards preparatory activities, and is willing to provide land and buildings as well as temporary office space initially and contribute to the operational expenses, the details of which will be worked out by discussion between UNIDO and our authorities.

It is understood that the discussions of Prof. Veziroglu with the World Bank and the Global Environment Facility have revealed their positive approach to such a project. The Turkish Government will be approaching them officially in this regard, and would like to have UNIDO assistance in following up with the above-mentioned institutions as well as with other agencies concerned.

cc: Dr. T. Nejat Veziroglu

15 May 1992

Mr. David Wright
Global Environment Facility - GEF
Bureau For Programme Policy And Evaluation
UNDP - United Nations Development Programme
One United Nations Plaza
New York, N.Y. 10017, A.B.D. (U.S.A.)

Re: UNIDO International Centre For Hydrogen Energy And Technology

Dear Mr. Wright:

The Government of Turkey is interested in hosting the subject matter Centre, and is willing to provide land and some of the Turkish Lira expenses in establishing and running the Centre. The preliminary estimates indicate that the capital expenditures needed (other than the land) is about \$60,000,000 and the annual operation expenses will be about \$9,000,000. We hope to raise most of these from the international organizations interested and from the industrial countries.

Since the Centre will be involved in the permanert solution of the major interrelated problems of energy and environment - i.e., replacing the fossil fuels as they are depleted, and remedying the problems of global warming, ozone layer depletion, acid rains and pollution - by introducing the Hydrogen Energy System in an orderly and economically prudent way, the Government of Turkey would very much like to approach the Global Environment Facility to support the Centre by providing a major part of the establishment and operating expenses.

cc: Mr. D.L. Siazon, Jr.
Director-General, UNIDO

bcc: Dr. T. Nejat Veziroglu

15 May 1992

Sayin Atilla Karaosmanoglu
Building E, Room E 1227
The World Bank
1818 H. Street, N.W.
Washington, D.C. 20433, A.B.D. (U.S.A.)

Re: UNIDO International Centre For Hydrogen Energy And Technology

Dear Dr. Karaosmanoglu:

The Government of Turkey is interested in hosting the subject matter Centre, and is willing to provide land and some of the Turkish Lira expenses in establishing and running the Centre. The preliminary estimates indicate that the capital expenditures needed (other than the land) is about \$60,000,000 and the annual operating expenses will be about \$9,000,000. We hope to raise most of these from the international organizations interested and from the industrial countries.

Since the Centre will be involved in the permanent solution of the major interrelated problems of energy and environment (i.e., replacing the fossil fuels as they are depleted, and remedying the problems of global warming, ozone layer depletion, acid rains and pollution), and as such help accelerate the world economic development, by introducing the Hydrogen Energy System in an orderly and economically prudent way, the Government of Turkey would very much like to approach the World Bank to support the Centre by providing a major part of the establishment and operating expenses.

cc: Mr. D.L. Siazon, Jr.
Director-General, UNIDO

bcc: Dr. T. Nejat Veziroglu