

# Great ICOLD Events in Brasilia (Brazil) in 2009:


**77<sup>th</sup> ANNUAL MEETING (May, 21<sup>st</sup> – 24<sup>th</sup> )**  
**&**  
**23<sup>rd</sup> CONGRESS (May, 25<sup>th</sup> – 29<sup>th</sup> )**



**77th ANNUAL MEETING**  
MAY, 21st to 24th, 2009

**23rd ICOLD CONGRESS**  
MAY, 25th to 29th, 2009

**PROMOTION**



CIGB  
ICOLD

INTERNATIONAL  
COMMISSION  
ON LARGE DAMS



**ORGANIZATION**



CIGB  
ICOLD

CBDB

BRAZILIAN COMMITTEE  
ON DAMS

Secretariat	Travel Agency	Support
		 



**WELCOME TO BRASILIA**



On behalf of the International Committee on Large Dams (ICOLD) it is my pleasure to invite all the ICOLD delegates and dam experts to attend and actively participate in the 23rd INTERNATIONAL CONGRESS ON LARGE DAMS and in the 77th ANNUAL MEETING, which will be held in Brasilia, Brazil, in May 2009.

These events will carry out after more than eighty years of existence of ICOLD. As ICOLD was established in 1928, in 2008 the Committee has been celebrating 80 years of its activity. Thus ICOLD, which has a strong and permanent structure that has been adapting and adjusting itself throughout the years to achieve its aims of working for the benefit of society, continues to hold its Congresses, Meetings, Conferences and Symposiums, where its participants provide accounts of the state of the art where dams are concerned, explain how dams contribute to sustainable development and its management, taking into account the importance of technical, economic, social and environmental aspects.

The Congress and the Annual Meeting are being held in Brazil, in its capital, the City of Brasília. In the past, the Brazilian Committee on Dams has successfully organised two Executive Meetings (in 1966 and 2002), and one Congress in Rio in 1982. And on this occasion it has taken on the challenge of organising yet another International Congress that, as is usually the case, it will do with great technical brilliance and excellent organisation, to show us all Brazil's great natural beauty. Furthermore, the country's excellent dam experts will be showing us their achievements, as well as the role that dams have played in developing the nation and generating hydropower.

Brazil is one of the largest states in the world, and has major rivers with abundant water resources. Brazil is also a nation that plays a very important role in the field of large and very large dams. The country has some of the largest dams in the world, and I think dam experts would find it extremely interesting to see with their own eyes, the Brazilian experience in planning, constructing and operating large dams in harmony with the environment. Brazil has enormous hydropower potential, and therefore it also has great possibilities for developing this type of clean and renewable energy.

ICOLD is the world's leading professional organization, dedicated to advancing the art and science of dam engineering and promoting a wise and sustainable development and management of the world's water and hydropower resources, and ICOLD is now focused on the dissemination of dam technology in favor of the developing countries.

Therefore, the subjects that are going to be discussed at this Conference are all issues that are essential to dam engineering and the role played by dams in achieving sustainable development:

- DAMS AND HYDROPOWER
- MANAGEMENT OF SILTATION IN EXISTING AND NEW RESERVOIRS
- UPGRADING OF EXISTING DAMS
- DAM SAFETY MANAGEMENT

The ICOLD Technical Committees are also going to meet during the Annual Meeting; these Committees, with more than 400 experts from all over the world, are responsible for analyzing and proposing the latest breakthroughs in the area of dams, which will subsequently be published in the ICOLD Bulletins. ICOLD will also be holding an Executive Meeting, at which the 88 members countries of the organization will develop the policies and processes that have to be implemented in the next few years.

All these interesting activities are going to take place in the centre of the country, in the City de Brasilia, which has been the capital of Brazil since 1960, since it took over these functions from Rio de Janeiro. Brasilia is a new and very interesting city, declared by UNESCO to be a Historical and Cultural Heritage of Humanity, where one can see and appreciate the architectural marvels of Oscar Niemeyer.

That is why I urge you to accompany us at our forthcoming ICOLD CONGRESS.



**Luis Berga**  
ICOLD President





It is with pleasure and honor that I invite all the ICOLD members and all the experts in dams, to participate in the 77th Annual Meeting of ICOLD and in the 23rd ICOLD Congress to be held from May, 21st to May 29th in Brasília, Brazilian capital city.

Brazil has a tradition in designing and building large dams and their engineers are recognized around the world as outstanding specialists. With an installed capacity in hydroelectric power plants of around 77.000 MW, Brazil certainly is an important reference for those who are related to large dam technology.

The participation in the above mentioned events is an excellent opportunity to exchange know-how and expertise in dam design and construction. We are sure you will enjoy and much appreciate this special occasion.

Brasília is a pleasant city to receive all the participants giving them excellent reception with proper installations to hold the meetings, warm hospitality, nice places to visit, excellent gastronomy and all the conditions to turn your stay here very pleasant.

For your convenience, the venues I have chosen to hold the events are comfortable and suitable providing excellent conditions for successful meetings.

A Symposium will also be organized with the main subject "Dams for Multiple Purposes"

The technical tours offered before the Annual Meeting and after the Congress provide the opportunity to visit very important hydroelectric power plants already operating or under construction, besides attractive cultural and historical places and delightful touristic attractions. These tours will cover the most important sites and regions in Brazil and also in Argentina, giving you the opportunity to get acquainted with a considerable segment of our country and even of the mentioned neighboring country.

On behalf of the Brazilian Committee on Dams and of the Organizing Committee I invite all the colleagues to join us to participate in both events and I assure you that we will organize effective meetings and make your stay in Brazil and in Brasília pleasant and successful.

We are waiting for you!

A handwritten signature in blue ink, appearing to read 'Edilberto Maurer'.

**EDILBERTO MAURER**  
CBDB Chairman



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### 77th Annual Meeting

### 23rd ICOLD Congress

	THURSDAY 21st MAY	FRIDAY 22nd MAY	SATURDAY 23rd MAY	SUNDAY 24th MAY	MONDAY 25th MAY	TUESDAY 26th MAY	WEDNESDAY 27th MAY	THURSDAY 28th MAY	FRIDAY 29th MAY
AM	Meeting of ICOLD Officers	Meeting of ICOLD Technical Committees	Executive Meeting	Symposium Congress Registration	Congress Opening Ceremony	Technical Session Q 88	Technical Session Q 89	Technical Session Q 90	Technical Session Q 91
AM	Annual Meeting Registration			Meeting of Session Officers with ICOLD Officers	Technical Exhibition Opening				
PM	Meeting of Chairmen of ICOLD Technical Committees and ICOLD Officers	Meeting of ICOLD Technical Committees	Executive Meeting	Symposium and Congress Registration	Technical Session Q 88	Technical Session Q 89	Technical Session Q 90	Technical Session Q 91	Closing Ceremony
PM	Annual Meeting Registration			Meeting of Session Officers					
PM	Welcome Reception	Cultural Program	Closing Dinner	Free Evening	Welcome Reception	Free Evening	Cultural Program	Free Evening	Farewell Banquet



## **INTERNATIONAL SYMPOSIUM ON DAMS AND RESERVOIRS FOR MULTIPLE PURPOSES**

### **The Contribution of Dam Engineering to Sustainable Water Resources Development**

**Brasilia, Brazil, May 24, 2009**

The Symposium is being organized as a sign of the continuing effort developed by all ICOLD members to incorporate proper solutions to the concerns about the sustainable water resources development in dam planning, design, construction, operation and decommissioning, whenever such structures are required to satisfy the growing water demand from all human needs and for other purposes such as flood control, power production, navigation, sediment control, etc.

Papers are invited on the subjects below. High priority will be given to examples from tropical and subtropical regions, since these are the cases where lessons from experience are mostly needed to improve, as much as possible, the decision-making process with respect to new water resources development projects.

#### **Main topic:**

**DAMS AND RESERVOIRS FOR MULTIPLE PURPOSES**, including:

#### **1 – Multiple Benefits**

- The Generation of Hydroelectric Power;
- Flood and Sedimentation Control;
- Fish and Wildlife Protection and Aquaculture;
- Irrigation;
- Navigation;
- Other Permanent Benefits on a River Basin-wide Scale.

#### **2 – Inventory of Multiple Uses in the Hydrographic Basin.**

#### **3 – Cost Benefit Analysis.**

#### **4 – Environmental Effects.**

#### **Venue**

Ulysses Guimarães Convention Center – Brasília

#### **Symposium format**

The Symposium will be organised in such a way as to provide a fair balance of allotted time to invited speakers and discussions from the floor.

Besides selected papers from authors having expressed their wish on an oral presentation, a key-note speaker will be invited to review the submitted papers and present his/her own view on key issues, to stimulate the discussions. Papers not selected for oral presentation and those whose authors express such a preference will be presented in poster format in a hall in the Symposium venue on May 24, 2009.

The papers should be written in English. Presentations could be in English, French, Spanish and Portuguese. Simultaneous translation to/from those languages will be provided.

The publication of proceedings will be in CD along with a book containing the abstracts of all papers.

#### **Papers format and time limit for submission**

Papers shall be prepared according to the same ICOLD guidelines provided at the ICOLD site or, alternatively at [www.icoldbrasil2009.org](http://www.icoldbrasil2009.org).

Abstracts of the papers should be submitted no later than November 30, 2008. By January 15, 2009 authors will be notified about the acceptance of their papers. Complete papers will have **January 30, 2009** as a deadline. Papers selected for oral presentation will become known by **March 30, 2009**.

(see "**New Guidelines for the Preparation of Papers Submitted to ICOLD Congress**" in <http://www.vncold.vn/En/Web/Content.aspx?distid=469> )

#### **Registration fee:**

€ 200, 00 or the equivalent in Brazilian Reais. Participants under 35 will be granted a 50% discount. (Age must be stated upon registration).

#### **Some highlights about Brazil**

Brazil held 207 international congresses in 2006. This figure makes the country the 7th most important destination for congresses (source: ICCA - International Congress & Convention Association)

- One of the biggest democracies: over 180 million inhabitants
- All religions can be found in Brazil coexisting with no conflict or discord
- Heterogeneous population and creative people
- The most industrialized country in the Southern Hemisphere
- The biggest biodiversity in the world: 53 National Parks
- 17 sites listed by UNESCO as World Heritage

#### **Some highlights about Brasilia**

Inaugurated in 1960, Brasília continues ahead of its time. With 47 years, Brasilia is one of the most modern cities worldwide.

Designed to be the center of Brazilian decisions, it was also transformed into a world destination of excellence in the business and events market. That vocation is not by chance. The tourist infrastructure and the exquisite beauty of Brasília makes this city the perfect place to hold great events.

#### **Ulysses Guimarães Convention Center**

Provided with First Class infrastructure and equipments, easy and fast access from the airport and the main points of the city, the new Convention Center Ulysses Guimarães winds up the performance of Brasilia in the segment of tourism of events, fairs, conferences and business. It is located beside City Park (Parque da Cidade), where there is ExpoCenter Brasilia, a huge covered exhibition center with great parking space. It stands 20 minutes from the airport.



### General Information

Preceding and following the Annual Meeting there will be a choice of 11 study tours (duration 1 to 7 days), which will take you to the most interesting parts of Brazil. The tours were arranged to show representative dams in Brazil.

Simultaneously, the tours present scenic, historical and cultural sites of Brazil.

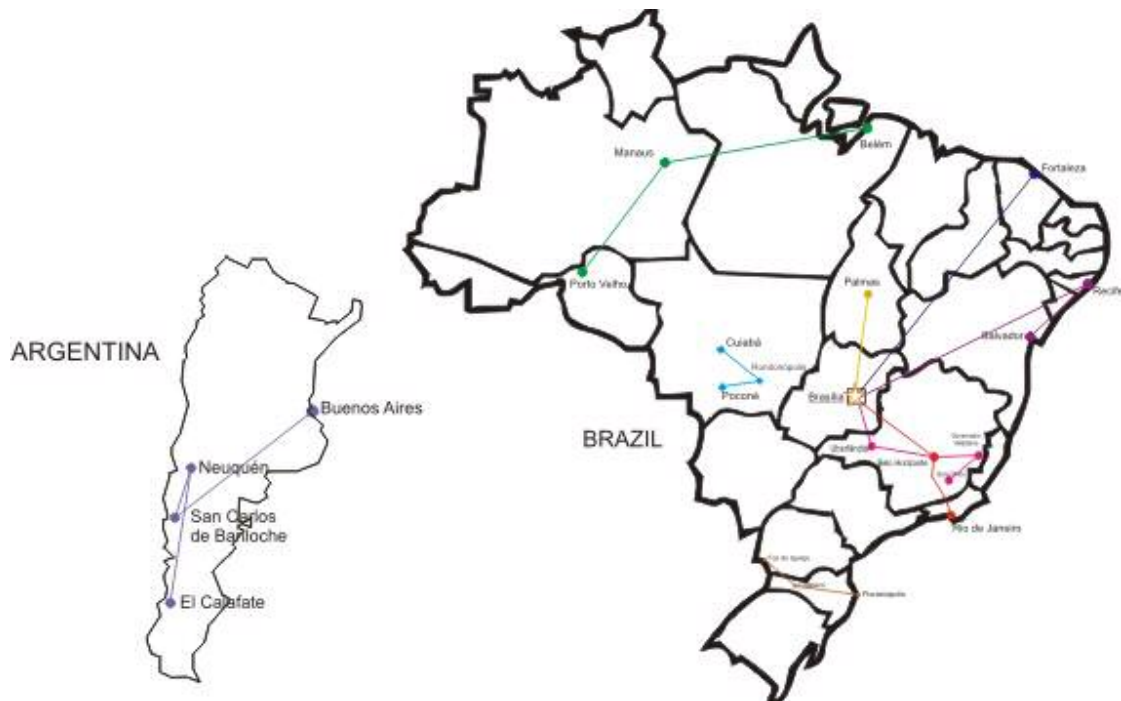
### Registration and Payment

To register for the study tours, use the form that will be enclosed in the Final Bulletin. This form will be also in the home page.

The number of participants per tour is restricted due to limited hotel and charter plane capacities. At the same time, a minimum number of participants is necessary for the tour to take place.

### Prices

The tour prices will be stated in the Final Bulletin and home page. The prices will include all "basic expenses" such as hotel accommodation, meals, admission fees, service charges and taxes, transport by plane, coach, train or boat, as well as the connecting flights to and from Brasilia as will be stated in the tour descriptions.





## PRE STUDY TOURS

### Study Tour A - BRAZILIAN SOUTHEAST

6 days - 2 dams (May 15 to 20, 2009)

**Day1-** Rio de Janeiro [[www.riodejaneiro-turismo.com.br](http://www.riodejaneiro-turismo.com.br)], city tour and overnight stay.

**Day2-** Trip to Petrópolis [[www.petropolis.rj.gov.br](http://www.petropolis.rj.gov.br)], visit to Imperial Museum and other tourist sites, overnight stay.

**Day3-** Visit to HPP Simplício and SHP Santa Fé I. Overnight stay in Juiz de Fora .

**Day4-** Trip to Tiradentes [[www.tiradentes.mg.gov.br](http://www.tiradentes.mg.gov.br)], sight seeing including São João del Rei [[www.saojoaodelrei.mg.gov.br](http://www.saojoaodelrei.mg.gov.br)], overnight stay in Tiradentes.

**Day5-** Trip to Belo Horizonte [<http://portal1.pbh.gov.br>]. On the way, visit to Congonhas [[www.congonhas.net](http://www.congonhas.net)]. Sight seeing and overnight stay in Belo Horizonte

**Day6-** Visit to Inhotim Park and Art Museum [[www.inhotim.org.br](http://www.inhotim.org.br)] and flight to Brasilia.



### Study Tour B – BRAZILIAN NORTHEAST

5 days – 2 dams (May 16 to 20, 2009)

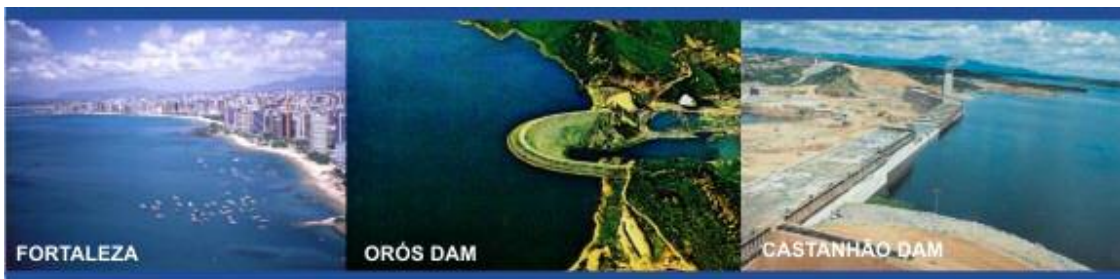
**Day1-** Fortaleza [[www.fortaleza.ce.gov.br](http://www.fortaleza.ce.gov.br)], city tour and overnight stay.

**Day2-** Fortaleza, visit beaches and other tourist sites, overnight stay.

**Day3-** Bus trip to Orós, site seeing and visit to Orós Dam, overnight stay.

**Day4-** Visit to WR Castanhão Dam and bus trip to Fortaleza, overnight stay.

**Day5-** Flight to Brasilia [[www.brasilia.df.gov.br](http://www.brasilia.df.gov.br)].



### Study Tour C – BRAZILIAN AMAZON

6 days – 2 dams (May 30 to June 4, 2009).

- Day1-** Trip to Porto Velho [[www.setur.ro.gov.br](http://www.setur.ro.gov.br)], city tour and overnight stay.
- Day2-** Visit to HPP Santo Antonio and flight to Manaus [[www.amazonastur-en.am.gov.br](http://www.amazonastur-en.am.gov.br)], overnight stay.
- Day3-** City tour in Manaus and other tourist sites, overnight stay.
- Day4-** Trip to Belém [[www.paraturismo.pa.gov.br](http://www.paraturismo.pa.gov.br)], city tour and overnight stay.
- Day5-** Trip to Tucuuruí [[www.tucuruionline.com](http://www.tucuruionline.com)], site seeing and visit to HPP Tucuruí, overnight stay.
- Day6-** Flight to Belém.



**Study Tour D – BRAZILIAN NORTHEAST**  
**6 days – 6 dams (May 30 to Jun 4, 2009).**

- Day1-** Trip to Recife [<http://www.mre.gov.br/cdbrasil/itamaraty/web/ingles/divpol/nordeste/pe/recife/>], city tour and overnight stay.
- Day2-** Recife, visit beaches and other tourist sites, overnight stay.
- Day3-** Trip to Canindé de São Francisco, sight seeing and visit HPP Xingó, overnight stay.
- Day4-** Bus trip to Paulo Afonso by boat and visit HPPs Paulo Afonso I, II, III, IV and HPP Moxotó, return to Canindé de São Francisco by coach, overnight stay.
- Day5-** Trip to Salvador [[www.salvadorbahia.ba.gov.br](http://www.salvadorbahia.ba.gov.br)], city tour and overnight stay.
- Day6-** Salvador, visit beaches and other tourist sites.



**Study Tour E – BRAZILIAN CENTER - WEST**  
**7 days – 4 dams (May 30 to June 5, 2009)**

- Day1-** Trip to Cuiabá [[www.cuiaba.mt.gov.br](http://www.cuiaba.mt.gov.br)], city tour and overnight stay.
- Day2-** Visit to HPP Manso and visit Parque Chapada dos Guimarães [[www.ibama.gov.br/parna\\_guimaraes/](http://www.ibama.gov.br/parna_guimaraes/)]. Return to Cuiabá, overnight stay.
- Day3-** Bus trip to Rondonópolis, sight seeing and visit to SHP Rondonópolis, overnight stay.
- Day4-** Visit to HPP Itiquira and HPP Ponte de Pedra. Return to Cuiabá, overnight stay.
- Day5-** Bus trip to Poconé [[www.pmpocone.com.br](http://www.pmpocone.com.br)], sight seeing and overnight stay.
- Day6-** Poconé, visit to Pantanal [<http://www.pantanalms.tur.br>] and other tourist sites, overnight stay.

**Day7-**Bus trip to Cuiabá.



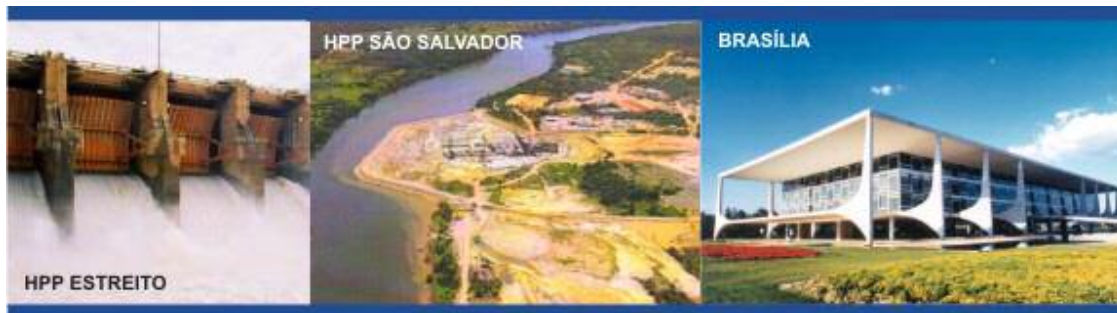
**Study Tour F – BRAZILIAN CENTER – WEST**  
4 days – 2 dams (May 30 to June 2, 2009)

**Day1-** Trip to Palmas [www.palmas.to.gov.br], city tour and overnight stay.

**Day2-** Visit to HPP Estreito by plane. Return to Palmas, overnight stay.

**Day3-** Visit to HPP São Salvador by plane. Return to Palmas, overnight stay.

**Day4-** Trip to Brasília.



**Study Tour G - BRAZILIAN SOUTHEAST**  
6 days - 2 dams (May 30 to June 04, 2009)

**Day1-** Flight Brasília - Uberlândia. Take coach to visit HPP Nova Ponte. Overnight stay in Uberlândia.

**Day2-** Flight Uberlândia – Belo Horizonte [http://portal1.pbh.gov.br], proceeding by coach to Ouro Preto [www.ouropreto.org.br], sight seeing and overnight stay.

**Day3-** Additional sight seeing and return to Belo Horizonte, overnight stay.

**Day4-** Flight to Governador Valadares, proceeding by coach to HPP Baguari. Return to Belo Horizonte and overnight stay.

**Day5-** Visit to Mutuca tailings dam. Sight seeing in Belo Horizonte and overnight stay.

**Day6-** Visit to Inhotim Park and Art Museum. Transfer to Belo Horizonte airport for departure.



**Study Tour H – BRAZILIAN SOUTH**  
**6 days – 3 dams (May 30 to Jun 4, 2009)**

- Day1-** Trip to Florianópolis [<http://www.pmf.sc.gov.br>], city tour and overnight stay.  
**Day2-** Florianópolis, visit beaches and other tourist sites, overnight stay.  
**Day3-** Trip to Chapecó by plane, sight seeing and visit to HPP Foz do Chapecó, overnight stay.  
**Day4-** Bus trip to Boa Vista da Aparecida and visit to HPP Salto Caxias. Overnight stay in Cascavel.  
**Day5-** Bus trip to Foz do Iguacu [[www.fozdoiguacu.pr.gov.br](http://www.fozdoiguacu.pr.gov.br)], sight seeing and overnight stay.  
**Day6-** Visit to HPP Itaipu and other tourist sites.



**Study Tour I – ARGENTINA post [[www.sectur.gov.ar](http://www.sectur.gov.ar)]**  
**6 days – 4 dams (May 30 to Jun 4, 2009)**

- Day1-** Trip to Buenos Aires [[www.bue.gov.ar](http://www.bue.gov.ar)], city tour and overnight stay.  
**Day2-** Trip to San Carlos de Bariloche [[www.bariloche.com.ar](http://www.bariloche.com.ar)], sight seeing and overnight stay.  
**Day3-** Visit to HPP Alicurá and HPP Piedra del Águila. Overnight stay in Neuquén.  
**Day4-** Trip to El Calafate [[www.elcalafate.gov.ar](http://www.elcalafate.gov.ar)] and visit to Glaciar Perito Moreno and other tourist sites, overnight stay.  
**Day5-** Visit to HPP Condor Cliff and HPP Barrancosa. Overnight stay in El Calafate.  
**Day6-** Trip to Buenos Aires.



**ONE DAY STUDY TOURS**

**Study Tour J – BRAZILIAN CENTER – WEST**  
1 day – 1 dam (May, 23, 2009) – Bus trip  
Brasília ? HPP Corumbá III ? Brasília

**Study Tour L – BRAZILIAN CENTER – WEST**  
1 day – 1 dam (May, 24, 2009) - Bus trip  
Brasília ? HPP Queimado ? Brasília



Brazil is a very large country with plenty of hydro resources and an enormous potential for hydroelectric generation. For this reason the larger and more important dams are related to hydropower projects in spite of the large number of other dams for various purposes.

There are more than 1.000 large dams in Brazil, more than 650 of them for hydropower generation and around 400 for other purposes, like tailings dams, flood control, irrigation, “water supply” and navigation.



HPP TUCURUI



HPP ITAIPU

There are 85 hydroelectric power stations under construction totaling around 5.000 MW and other 739 planned (HPP + SHPP) totaling around 37.000 MW.

Different types of dams have been constructed in Brazil most of them successfully. Some of these dams will be visited during the programmed study tours

<http://icoldbrasil2009.org/ingles/home.htm>

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