

# **REMOVAL - DECOMMISSIONING SOLUTIONS**

Decommissioning is the process of removing oil and gas facilities when it reaches the end of its useful life. The process includes planning, engineering study, obtaining stakeholders approval, environmental management, cleaning, removal, disposal or reuse. IEV offers a complete turnkey decommissioning solution including project management, engineering, preparation, removal and disposal of offshore facilities.

# OUR TURNKEY DECOMMISSIONING SOLUTIONS

- Decommissioning Studies
  - o Regulatory Study
  - o Health and Safety Assessment
  - o Environmental Assessment
  - o Feasibility Study
  - o Scoping
  - o Comparative Assessment
  - o Risk Assessment
  - o Decom Trainig
  - o Deterministic and Probablistic cost estimates

#### Pre-Decommissioning

- o Engineering Preparation Including Methodology, Analysis and Sequencing
- o Procedures for HSE, Decommissioning, Underwater Diving, Non-Destructive Test, Cutting and Removal, Waste Management and Environmental Monitoring
- o Work Pack Preparation

- o Job Hazard & Safety Analysis
- o Pre-Mobilisation Site Visit
- o Enviromental Survey and Monitoring

#### • Decommissioning

- o Gas Test and Platform Make-Safe
- o Soil Plug Removal
- o Cutting Tools
- o Cold Cutting Tools
  - · Abrasive Water Jet System
  - · Diamond Wire Cutting System
  - · Mechanical Saw
  - Hydraulic Shear
- o Hot Cutting Tools
  - · Oxy-Flame
  - · Brocco
- o Heavy-lift Vessels for Lifting of Severed Structures
- o Material Barges and Transportation to Shore
- o Environmental Survey and Monitoring

#### • Post-Decommissioning

- o Environmental Survey and Monitoring Seawater Sampling & Seabed Sediment Analysis
- o Removal of Sea-Fastening and Load-in of Structure
- o Cutting of Structure for Disposal
- o Disposal for Scrap or Deliver to Yard for Recycling
- o Final Documentation

In addition to the decommissioning of structures, we also offer rigless P&A of wells and cut and pull of conductors prior to removal of jacket and deck.



# **REUSE – PLATFORM REUSE SOLUTIONS**

IEV offers an alternative field development option to commercialise new field development at a much faster and significantly lower cost than conventional custom design and built concepts. Through a platform reuse program, IEV is able to offer the following advantages:

#### 1) Fast track field development

Platform reuse is implemented as an alternative option to the conventional custom design and construction practices of offshore platforms to accelerate production schedule, especially for small and marginal fields.

IEV's Platform Reuse Solutions employs proven engineering practices from the Gulf of Mexico to develop new oil and gas fields using refurbished structures and equipment, a solution that could reduce field development time as much as 50%.

Refurbished platforms can be supplied as fast as (six) 6 months from receipt of Letter of Award (LOA).

IEV offers turnkey solutions ranging from structure matching to supply of refurbished platforms according to applicable engineering standards, obtaining necessary local approvals to import, install and operate.

After a successful criteria match, the reuse platform candidate is put through an intense refurbishment program conducted by our team of highly-skilled engineers and technicians. Every critical section of the refurbished platform is subjected to a meticulous inspection and recertification process by industry approved agencies before delivering it to client.

#### 2) Reduce cost of field development

If you are looking for a cost effective solution to develop your marginal fields, Platform Reuse Solutions may be an ideal development option. Apart from reducing time to first oil by as much as 50%, we can help reduce your capital expenditure by supplying assets that can cost up to 40% lower than conventional methods.

All structures and equipment supplied come with standard warranty and required certification. Asset remaining life studies are also provided for refurbished equipment.

#### 3) Reduce decommissioning costs

Ageing assets carry much higher value than the worth of scrap steel. Oil and gas platforms are designed with a high level of redundancy and can survive far beyond their designed fatigue life, as proven in many platform rejuvenation or life extension projects. We can help you to recycle your offshore platforms and find buyers who may be able to use your decommissioned assets for their new field development thus partially offset your decommissioning cost and residual liability.

The higher value resulted from the sales of platforms, especially topside and processing equipment could significantly reduce your overall decommissioning costs. We currently offer an inventory of ageing and already decommissioned assets to potential customers. We also can assist you to find a potential match for the reuse of your ageing assets.



# **OUR TURNKEY PLATFORM REUSE SOLUTIONS**

Specialised range of solutions includes;

- Decommissioning Studies
- Decommissioning
- Procurement
- Engineering, Refurbishment or Modification
- Load-Out and Transportation
- Permitting
- Importation
- Installation
- Hook-Up & Commissioning
- Host Tie-In





# Why IEV?

# The First

We are the first contractor in Malaysia to implement a turnkey EPRD followed by platform reuse concept in 2011 involving EPCIC of a refurbished wellhead platform, pipeline and host tie-in to an existing cluster.

#### Experience

Our years of experience in decommissioning and jacket installation solutions enable us to understand and undertake EPRD and platform reuse concept faster than most players in the market. To date, we have successfully participated in the removal of 19 offshore structures including two (2) turnkey Engineering, Procurement, Removal and Disposal (EPRD) projects. We have provided supporting services for the installation of more than 40 fixed platforms in the Asia Pacific region. In collaboration with our strategic alliance partner, we now have the capability to provide Turnkey Solutions starting from platform criteria match to the supply, installation and commissioning of refurbished platforms at the new location.

## **Data and Intelligence**

The first step to our Turnkey Solutions is to source for the closest matching candidate(s) to meet your design parameters and criteria, development schedule and budget. We have developed an extensive database and market intelligence to find the best fit option to meet your needs.

## **Project Management & Engineering**

With a skilled and experienced workforce for EPRD and EPIC project management capabilities, we will be able to offer engineering solutions that can be executed from decommissioning to reuse within budget and schedule.



For further information please contact:

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