

# Regulatory Framework and Compliance — Green Hydrogen in the UAE

## Regulatory Framework and Compliance: Green Hydrogen in the UAE

Complete Guide to Legislation, Incentives, International Certifications, and Investment Protection

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### 1. Introduction to the UAE Regulatory Framework

The United Arab Emirates has developed one of the world's most favorable regulatory frameworks for green hydrogen investments. Through the National Hydrogen Strategy 2050 and specific regulatory frameworks, the UAE aims to rank among the top 10 hydrogen producers globally by 2031.

The regulatory system is structured across three levels:

- Federal: National strategies and macro policies
- Emirate: Specific regulations (especially Abu Dhabi)
- Special zones: Free zones with preferential regimes

This multi-level architecture enables regulatory flexibility and competition among jurisdictions to attract investment while maintaining national strategic coherence.

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### 2. Foundational Strategic Frameworks

#### 2.1 UAE Energy Strategy 2050

- 44% clean energy by 2050
- USD 163 billion in renewable investments
- Integration of hydrogen as a key energy vector

#### 2.2 UAE National Hydrogen Strategy (July 2023)

##### Quantitative objectives

- 2031: 1.4 MTPA total (1.0 green + 0.4 blue)
- 2040: 7.5 MTPA
- 2050: 14.9–22 MTPA

##### Key components

- Development of “hydrogen oases” (integrated hydrogen clusters)
- 25% emissions reduction in hard-to-abate sectors by 2031 → 100% by 2050
- 10 implementation areas with plans through 2031

#### 2.3 Low-Carbon Hydrogen Regulatory Framework (Abu Dhabi)

- Status: Draft since October 2022, progressive implementation

##### Key structures proposed:

- Hydrogen Valleys: Geographic areas with multiple integrated applications
- Clean Energy Clusters: Locations with clean generation connected by dedicated networks

##### Responsible entities:

- Abu Dhabi DoE: Coordination and designation of valleys
- EWEC: Procurement of clean electricity and water
- TRANSCO: Construction and operation of transmission lines

- Abu Dhabi DMT: Allocation of land and public corridors
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### 3. Climate Change Legislation

#### 3.1 Federal Decree-Law No. (11) of 2024

- Effective date: 30 May 2025
- Scope: All Emirates and economic zones, including free zones
- Universal application: All operations generating GHG emissions, regardless of size

“Significant emitters” designated by MOCCA must:

- Establish a verified emissions inventory
- Submit periodic emissions reports
- Implement mitigation measures (energy efficiency, clean energy, CCUS, offsetting)
- Maintain emissions records for a minimum of 5 years

#### 3.2 Cabinet Resolution No. (67) of 2024

- Creation of the National Register for Carbon Credits (NRCC)
  - Electronic system for emissions monitoring
  - Compliance verification
  - National carbon market
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### 4. Fiscal and Financial Incentives

#### 4.1 Federal Incentives

##### Corporate Tax Relief:

- 0% corporate income tax for 50 years for green hydrogen projects
- Exemption applicable from start of operations
- Extendable to expansions of existing projects

##### Value Added Tax (VAT):

- 0% VAT on supply of solar generation equipment
- VAT exemption for required machinery and materials (except passenger vehicles)
- Exports from hydrogen projects: 0% VAT

##### Customs Duties:

- Full exemption on import duties for electrolysis and CCUS equipment
- Removal of tariffs for machinery and construction materials
- Exceptions: passenger vehicles

##### Tax Holidays Extensions:

- Solar generation equipment and materials: tax and duty advantages during first 10 years of certification
- Potential evolution toward Production-Linked Incentives (PLIs)

#### 4.2 Emirate-Specific Incentives

##### Dubai:

- Exemption from property tax for properties used in projects
- Removal of stamp tax and documentation fees

- Exemptions in company and facilities establishment contracts

#### **Abu Dhabi - Cluster Consumer Supply Tariff:**

- Specific electricity and water tariffs based on requirements and commitments
  - Optimized pricing for low-carbon hydrogen activities
  - Managed by EWEC via Power and Water Purchase Agreements (PWPA)
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## **5. Free Zones and Special Economic Zones**

### **5.1 General Benefits of Free Zones**

#### **Ownership Structure:**

- 100% foreign ownership without need for a local sponsor
- Full control by international investors

#### **Tax Benefits:**

- 0% corporate tax (extended periods per zone regulations)
- 0% personal income tax
- Full repatriation of profits and capital without restrictions

#### **Operational Advantages:**

- Exemption from import/export duties
- Simplified administrative and legal procedures
- One-stop-shop services for business setup

### **5.2 Strategic Free Zones for Hydrogen**

#### **KIZAD (Khalifa Industrial Zone Abu Dhabi):**

- Large industrial plots available
- Exceptional connectivity (multimodal)
- Conducive to heavy manufacturing
- Proximity to Abu Dhabi Ports and export facilities

#### **Jebel Ali Free Zone (JAFZA - Dubai):**

- One of the largest free zones in the world
- Outstanding logistics and access to Jebel Ali Port
- Largest port in MENA for export

#### **Dubai Industrial City (DIC):**

- Dedicated industrial hub with specialized zones
- Infrastructure tailored for manufacturing

#### **SAIF Zone & Hamriyah Free Zone (Sharjah):**

- Cost-effective solutions
  - Strategic locations for regional distribution
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## **6. International Certifications and Compliance**

### **6.1 EU RFNBO Compliance (Renewable Fuels of Non-Biological Origin)**

#### **Definition of RFNBO:**

- Fuels produced from renewable electricity
- Not derived from biomass or fossil fuels
- Fully traceable and aligned with strict environmental regulations

**RED II/RED III Compliance Criteria:**

- Renewable electricity sourcing (solar, wind, hydro)
- Additionality (evidence of newly added renewable capacity)
- Temporal and geographical correlation
- Certification and documentation of emissions and energy use

**6.2 Recognized Certification Systems**

**CertifHy EU RFNBO Scheme:**

- Officially recognized by the European Commission
- Certifies compliance with EU regulations for renewable hydrogen and derivatives
- Covers fuels produced globally and used in transport within the EU
- Verifies hydrogen and e-fuels meet RED II, Delegated Acts, and Implementing Regulation

**SGS Certification Services:**

- Approved certification body for the CertifHy EU RFNBO voluntary scheme
- Services for hydrogen producers and suppliers
- Compliance with the EU RFNBO framework

**6.3 Low-Carbon Hydrogen Certificates (UAE)**

**Abu Dhabi Framework:**

- Certification for low-carbon hydrogen production
- Integration with international certification systems
- Traceability from production to end-use

**Certification Methodology:**

- Verification of renewable electricity sources
- Electrolysis process audits
- Full life-cycle emissions documentation

**7. Investment Protection**

**7.1 Bilateral Investment Treaties (BITs)**

The UAE maintains BITs with 50+ countries, including:

- United States, United Kingdom, Germany, France
- Japan, South Korea, China, India
- Nordic countries (Denmark, Sweden, Norway)

Standard protections include:

- Protection against expropriation without fair compensation
- Free transfer of funds and profits
- Fair and equitable treatment
- International arbitration for disputes (ICSID, UNCITRAL)

## **7.2 Multilateral Investment Guarantee Agency (MIGA)**

- Political risk insurance
- Coverage for transfer restrictions and inconvertibility
- Protection against war and civil disturbance
- Breach of contract by government entities

## **7.3 Sectoral Investment Protection Agreements**

### **Green Investment Protection:**

- Fiscal stability clauses in long-term contracts
- Grandfathering of fiscal incentives
- Sector-specific dispute resolution for renewables

### **Offshore Investment Vehicles:**

- ADGM common law jurisdiction
  - DIFC separate legal system
  - Additional protections under international financial frameworks
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## **8. Licensing Procedures**

### **8.1 Federal Licensing**

#### **Ministry of Energy and Infrastructure (MoEI):**

- Licensing for hydrogen projects >100 MW
- Fast-track permitting for strategic projects
- Timeline: 60–90 days for approvals

#### **Environmental Impact Assessment:**

- Mandatory for projects >50 MW
- Streamlined process for renewables
- Integration with climate change compliance

### **8.2 Emirate-Level Licensing**

#### **Abu Dhabi Department of Energy (DoE):**

- Specific licensing for Hydrogen Valleys
- Coordination with Abu Dhabi Department of Municipalities and Transport
- Land allocation for Clean Energy Clusters

#### **Dubai Electricity and Water Authority (DEWA):**

- Grid connection approvals
- Power purchase agreement negotiations
- Independent Power Producer (IPP) licensing

### **8.3 Free Zone Licensing**

#### **One-Stop-Shop Services:**

- Business license, visa processing, customs clearance
- Simplified procedures for foreign investors

- Typical timeline: 2–4 weeks

**Industry-Specific Licenses:**

- Manufacturing license for electrolyzers
  - Trading license for hydrogen and derivatives
  - Service license for O&M and consulting
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## 9. Compliance and Reporting Requirements

### 9.1 Greenhouse Gas Emissions Reporting

**Mandatory Reporting for “Significant Emitters”:**

- Annual emissions inventory submission
- Third-party verification requirement
- Penalties for non-compliance or late submission

**Electronic Monitoring System:**

- Real-time emissions tracking
- Integration with the National Register for Carbon Credits
- Automated compliance verification

### 9.2 Financial Reporting and Auditing

**International Financial Reporting Standards (IFRS):**

- Mandatory for companies in free zones
- Annual auditing by approved audit firms
- Transparency requirements for foreign investors

**Transfer Pricing Documentation:**

- OECD guidelines implementation
- Country-by-country reporting for multinational enterprises
- Documentation for intra-group transactions

### 9.3 ESG Compliance

**Environmental, Social, Governance Reporting:**

- Increasing requirements for listed companies
  - Integration with international ESG frameworks
  - Reporting on climate-related financial disclosures
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## 10. Dispute Resolution and Arbitration

### 10.1 Domestic Dispute Resolution

**UAE Courts System:**

- Federal courts for constitutional and federal law matters
- Local courts for commercial disputes
- Specialized commercial courts in Dubai and Abu Dhabi

**Alternative Dispute Resolution:**

- Dubai International Arbitration Centre (DIAC)

- Abu Dhabi Commercial Conciliation and Arbitration Centre (ADCCAC)
- ADGM Courts (common law jurisdiction)

## 10.2 International Arbitration

### Arbitration Centers Recognition:

- ICC International Court of Arbitration
- London Court of International Arbitration (LCIA)
- Singapore International Arbitration Centre (SIAC)
- ICSID for investment disputes

### Enforcement of Awards:

- UAE is a signatory to the New York Convention
- Automatic enforcement of foreign arbitral awards
- Limited grounds for challenging awards

## 10.3 Sector-Specific Dispute Resolution

### Energy Disputes:

- Specialized panels with technical expertise
- Expedited procedures for project disputes
- Mediation preferred for offtaker agreements

## Summary

The UAE regulatory framework for green hydrogen is structured across three levels—federal, emirate, and special economic zones—providing both national strategic coherence and jurisdictional flexibility.

### Key Regulatory Components

#### Strategic Frameworks

- UAE National Hydrogen Strategy (July 2023): Targets of 1.4 MTPA by 2031, 7.5 MTPA by 2040, and 14.9–22 MTPA by 2050
- UAE Energy Strategy 2050: 44% clean energy target with USD 163 billion committed investment
- Low-Carbon Hydrogen Regulatory Framework (Abu Dhabi, in progressive implementation since October 2022)

#### Climate Change Legislation

- Federal Decree-Law No. 11 of 2024: Universal GHG emissions reporting, mitigation measures, and verification requirements (effective 30 May 2025)
- Cabinet Resolution No. 67 of 2024: National Register for Carbon Credits (NRCC) for emissions monitoring and compliance

#### Fiscal Incentives

- Corporate tax: 0% for green hydrogen projects in designated zones for up to 50 years
- VAT: 0% on solar generation equipment and hydrogen project exports
- Customs duties: Full exemption on electrolysis and CCUS equipment
- Cluster Consumer Supply Tariff (Abu Dhabi): Optimized electricity and water pricing for hydrogen facilities

#### Free Zones

- 100% foreign ownership without local sponsor requirement
- Full repatriation of profits and capital
- One-stop-shop services for business setup (typical timeline: 2–4 weeks)

- Strategic zones: KIZAD, JAFZA, Dubai Industrial City, SAIF Zone

### International Compliance

- EU RFNBO certification: CertifHy EU RFNBO Scheme recognized by European Commission
- RED II/RED III compliance criteria: Additionality, temporal and geographical correlation
- SGS certification services: Approved for CertifHy voluntary scheme

### Investment Protection

- Bilateral Investment Treaties: Over 50 countries, including US, UK, Germany, France, Japan, South Korea, China, India
- Standard protections: Expropriation safeguards, free transfer of funds, fair and equitable treatment, international arbitration (ICSID, UNCITRAL)
- MIGA coverage: Political risk insurance for transfer restrictions, war, civil disturbance, and breach of contract

### Licensing and Approvals

- Federal level (MoEI): Fast-track permitting for projects  $\geq 100$  MW (60–90 days)
- Emirate level: Abu Dhabi DoE for Hydrogen Valleys; DEWA for grid connection and IPP licensing in Dubai
- Free zones: Industry-specific licenses (manufacturing, trading, services) via one-stop-shop (2–4 weeks)

### Compliance and Reporting

- GHG emissions: Mandatory annual inventory submission with third-party verification for significant emitters
- Financial reporting: IFRS standards mandatory for free zone companies
- ESG disclosure: Increasing requirements aligned with international frameworks

### Dispute Resolution

- Domestic: UAE Federal Courts, specialized commercial courts (Dubai, Abu Dhabi), ADGM Courts (common law)
- International arbitration: Recognition of ICC, LCIA, SIAC, ICSID; automatic enforcement of awards under New York Convention

### Implementation Timeline

The regulatory framework is in progressive implementation:

- **2024–2025:** Completion of Low-Carbon Hydrogen Regulatory Framework (Abu Dhabi); entry into force of Federal Decree-Law No. 11 of 2024
- **2025–2026:** Operationalization of certification schemes (CertifHy, RFNBO); allocation of land in hydrogen oases
- **2026+:** Continuous refinement based on project learnings and international standard evolution

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**Sources:** UAE National Hydrogen Strategy 2050, Federal Decree-Law No. (11) of 2024, UAE Ministry of Energy and Infrastructure, Abu Dhabi Department of Energy, CertifHy EU RFNBO Scheme Documentation, UAE Investment Protection Agreements, Free Zone Authorities Regulations, MOCCA Climate Change Guidelines.

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### References (as listed in the PDF)

1. <https://cms.law/en/int/expert-guides/cms-expert-guide-to-hydrogen/united-arab-emirates>
2. <https://www.nortonrosefulbright.com/en/knowledge/publications/d3663d42/understanding-hydrogen-and-ccs-in-the-uae>
3. <https://www.pvknowhow.com/countries/uae/government-incentives-solar-uae/>
4. <https://hinicio.com/red-ii-compliance-pre-certification-in-united-arab-emirates/>
5. <https://u.ae/en/about-the-uae/strategies-initiatives-and-awards/strategies-plans-and-visions/environment-and-energy/national-hydrogen-strategy>
6. <https://iclg.com/practice-areas/foreign-direct-investment-regimes-laws-and-regulations/02-uae-s-new-strategic-sectors-for-fdi-exploring-the-diversification-through-green-energy-advanced-technologies-and-healthcare>

7. <https://www.nortonrosefulbright.com/de-de/wissen/publications/d3663d42/understanding-hydrogen-in-the-uae>
8. <https://enterprise.news/uae/en/news/story/1d108b9d-d3ef-473f-9f1c-ee829b1c9658/uae-to-develop-sustainable-hydrogen-production-legislation>
9. [https://www.investuae.gov.ae/assets/67121498d5eb1895e4ba1315\\_MOI%20Report%20EN%20%20Optimized.pdf](https://www.investuae.gov.ae/assets/67121498d5eb1895e4ba1315_MOI%20Report%20EN%20%20Optimized.pdf)
10. <https://www.sgs.com/en-ae/news/2025/05/sgs-recognized-as-approved-certification-body-for-certify-eu-rfnbo-voluntary-scheme>
11. <https://www.pinsentmasons.com/out-law/analysis/uae-businesses-must-act-now-ahead-of-climate-change-law>
12. <https://www.thearabtoday.com/uae-attracts-record-fdi-in-renewable-energy-sector/>
13. <https://www.state.gov/reports/2025-investment-climate-statements/united-arab-emirates/>
14. <https://r3sustainability.com/how-rfnbo-compliant-hydrogen-is-shaping-the-future-of-renewable-energy/>
15. 2024
16. <https://persianhorizon.com/news/uaes-economic-growth-new-investment-opportunities-in-renewable-energy-sector/>
17. <https://www.certify.eu/eu-rfnbo-scheme/>
18. 2024
19. <https://www.pyknowhow.com/countries/uae/solar-manufacturing-incentives-in-uae/>
20. <https://www.globalenergyblog.com/certification-roadmap-to-rfnbo-status-renewable-hydrogen-and-green-e-fuels-in-the-eu-part-2/>