

About This Report

Purpose of the Report

IIAC steadily strives for low-carbon, eco-friendly management and its Green Report published every year since 1995 to share its performance on low-carbon, eco-friendly management with stakeholders.

Standards of Writing the Report

This report abides by the Environmental Report Guidelines of the Ministry of Environment and GRI G4, an internationally complied report publication guideline, at core. Also, other guidelines that concern with Corporate Social Responsibility, such as ISO26000, UN Global Compact and ACI (Airports Council International) are incorporated to heighten our standard.

Period and Scope of the Report

This report is based on the Low-carbon, Eco-friendly activities and performance of 2014(Between 1.January and 31.December). Data of crucial value have been presented with 3-year record to effectively demonstrate the changes occurred. The report encompasses all business sites of Incheon Airport and certain data on partners and customers in the value chain, determined by the impact of Incheon Airport, are included.

Inquiries on the Report

Further questions and information regarding the content of this report can be found on Incheon Airport website and assistance can be sought through relevant departments.

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Report Cover



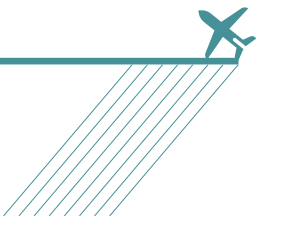
It depicts the image of IIAC in harmony with the green environment standing on green buds, expressing its strong commitment to take the lead in becoming 'a global leading low-carbon, eco-friendly airport.'

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CEO Message

“IIAC will propose new standards and directions for growth, progress to become a low-carbon, eco-friendly airport.”



Dear endeared stakeholders,

Since IIAC started its operations in 2001, it has steadily strived to grow into the world's best airport, garnering various accolades and acclaims. It was ranked No. 1 worldwide by ACI (Airports Council International) in ASQ (Airport Service Quality) for ten consecutive years in 2014 as the first airport to do so. It also won the World's Best Airport Award by the Global Traveler for 10 years consecutively. With the prize, the Incheon International Airport entered the Global Traveler Hall of Fame. As such, IIAC set new standards and directions to airport corporations around the world.

In today's world where travel and movement have become so common, the airport industry is growing at a fast pace and requires prompt responses to diverse changing situations in the management environment. In particular, global warming and climate change impact the airport industry both directly and indirectly are important issues for global airports to come up with common solutions. Accordingly, IIAC is taking the lead in fulfilling environmental responsibilities and creating a sustainable society as “a global leading low-carbon and eco-friendly airport.”

IIAC faces an inevitable increase in the amount of energy used due to the yearly hikes in the passenger and flight volume, phase 3 construction and new construction of an accessory building and the growth of tenants at the airport. However, its proactive energy saving efforts took place by adopting the high-efficiency LED lighting, establishing an energy management system, introducing new and renewable energies including the photovoltaic energy, operating the AC-GPS (Aircraft Ground Power Supply) and a green carbon hub, and airport construction with green certification. As a consequence, IIAC exceeded the goal of the GHG & energy target management system by 3.1% in 2014. IIAC also set mid-to long-term strategies to become a low-carbon, eco-friendly airport: sophisticating eco-friendly management, improving the energy efficiency, expanding the low-carbon operation and reinforcing the environmental resources management. As such, IIAC will further intensify the energy and GHG reduction endeavors, and successfully implement the GHG emission trading scheme that kicks off from 2015.

IIAC's unwavering efforts and achievements enabled its winning of the 2014 Airports Going Green award from the American Association of Airport Executives (AAAE) and Chicago Department of Aviation for the first time as an East Asian airport. The Ministry of Trade, Industry and Energy and the Ministry of Environment awarded the Korea Green Management Award to IIAC for over three times for the recognition of its international competitiveness of domestic industries by disseminating and spreading green management. IIAC also won the presidential commendation in the climate response category of the Global Green Management Excellence Award, hinting at how its endeavors and feats have been fully recognized at home and abroad.

Just like its challenging ambitious of reclaiming the sea 20 years ago to make an airport bore the fruit of a hub airport in Northeast Asia, IIAC will strive further to become “a global leading low-carbon, eco-friendly airport.” We ask for your continued interest and encouragement.
Thank you.

Park Wan-su
CEO & President
Incheon International Airport Corporation

Park Wan-su

Company Profile

The purpose of establishment of Incheon Airport Corporation (IIAC) is to facilitate air transportation and contribute to the development of the national economy through effective construction, maintenance, and operations of Incheon Airport by developing itself as a world-class airport corporation. Incheon Airport is making a big stride as a world-class airport since it opened. Currently, 88 airlines operate at the airport, covering 184 cities in 54 countries (as of December 2014). Thus, it is positioning itself as the hub of international air transportation in Northeast Asia.

General Overview

Date of Establishment	February 1, 1999
Headquarter location	47, 424-gil, Gonghangno, Jung-gu, Incheon
Organization	5 Divisions, 1 Offices, 29 Groups, 106 Teams, 1,146 Employees
Annual Processing Capability	410,000 Flights, 44,000,000 Passengers, 4,500,000 tons of Cargo
Affiliated Company	Incheon Airport Energy Ltd and PT.Mitra Incheon Indonesia
Investment Company	Incheon Golf Club and Khabarovsk Novy Airport

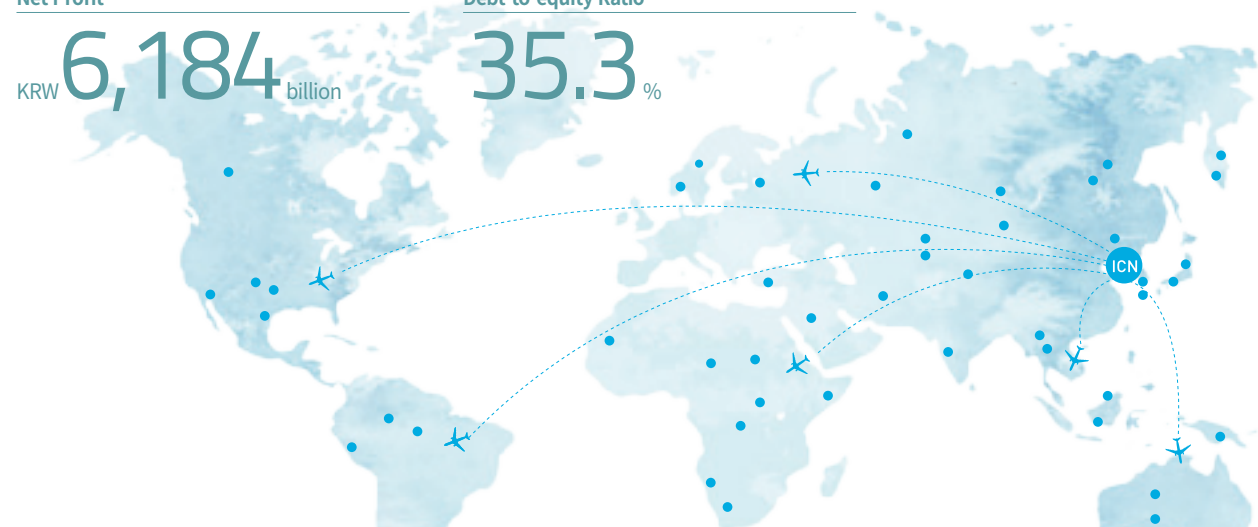
Capital
KRW **3.6178** trillion

Asset
KRW **8.1246** trillion

Sales
KRW **1.6798** trillion

Net Profit
KRW **6,184** billion

Debt-to-equity Ratio
35.3 %



Passengers

- 184 destinations in 54 countries (45,510,000 passengers)
- No. 8 in the volume of international passengers

Cargo

- Covering 86 cities in 40 countries (2.56 million tons)
- No.2 in international cargo traffic
- Air Cargo Excellence Awards
- Winning the 'Award for Excellence' for handling air cargo in Asia for five times

Operation/Service

- Selected as the Best Airport by ASQ for 10 consecutive years
- Received the World's Best Airport Award from Global Traveler for 10 consecutive years (Inducted as the only airport into the Global Traveler 'Hall of Fame')
- Awarded as the Best Airport in Asia-Pacific region at the TTG Travel Awards (for two consecutive years)
- Awarded as the World's Best International Transit Airport by Skytrax, a British agency
- Chosen as the World's Best Duty Free Shop by Business Traveler Magazine (yearly revenues exceeding KRW 2 trillion for the first time as an international airport duty free shop)



Corporate Vision and Goals

IIAC established a new vision and a strategy system titled 'Jump-up 2017 0 to 5' with a strong commitment to jump up higher as 'a Northeastern Asian hub airport' and 'an expert group in the airport industry.' In order to achieve 'Incheon Airport, Loved by the World, and Airport Corporation, Trusted by the People,' IIAC established core initiatives to execute four strategy directions and strategies' ensuring safety and convenience, strengthening hub network, expanding new infrastructure and gaining trust and respect as public corporation. Accordingly, IIAC strives to achieve the goals for each initiative.



Major Business Areas

IIAC initiates four main projects: ensuring safety and convenience, strengthening hub network, expanding new infrastructure and gaining trust and respect as public corporation.



Competitiveness of IIAC



Ranking No.1 in ASQ (Airport Service Quality)

Ranking No.1 for 10 consecutive years for the first time in the airport industry

IIAC was ranked No. 1 worldwide by ACI (Airports Council International) in ASQ (Airport Service Quality). IIAC has been the first ranker for 10 years from 2005 to 2014 in the ASQ Global Ranking. Its feat has been unprecedented by being No.1 in the Best Airport by Region and the Best Airport by Size for 10 years while topping the list as No.1 in the categories of 'Best Airport in Asia-Pacific' and 'Best Big Airport (over 40 million passengers a year)'. As for the Best Big Airport category, its winning against the world's prestigious airports including Singapore Airport and Beijing Airport is ever more significant since it has been first categorized into a big airport by enjoying the annual passenger volume of 40 million since 2013 in the evaluation.

Behind the background of the 10-year-long winning in ASQ, IIAC made the utmost efforts for 24/7 by 40,000 staff for such a long period time of 10 years without any complacency. IIAC's first rank in the service world without a single accident with about 340 million passengers, 24 million tons of cargo and 2.22 million flights has garnered even higher accolades abroad.

With IIAC heralding its name with the world's best service, the global view towards IIAC has dramatically changed for the past decade. Director General Angela Gittens of ACI extended accolades to IIAC saying that IIAC has the extraordinary record of having no single accident since it opened as well as being No.1 in service, which implies IIAC staff's devotion in the airport's excellence and customer service in the airport operation. About 7,000 visitors from all across the globe have visited Incheon Airport to benchmark it, while Aeroports de Paris (Paris Airports) and Schiphol Group proposed to forge strategic partnerships with IIAC, so international marketing and overseas business advancement are jointly carried out.

IIAC has grown as a world-class brand by ranking first in ASQ which is known as the most prestigious evaluation in the airport industry for 10 years, so serving as a new benchmark in airport service. IIAC will make further efforts to leap forward as the world's best expert group in the airport industry by scaling up the airport operating business including developing an airport city driven by the united force of 40,000 staff without any complacency.



Sharing measures for balanced growth and measures for sustainable development among global airports

IIAC organized the 2014 World Annual General Assembly of the Airports Council International (ACI) known as the Olympics of the world's airports. The ACI General Assembly is an annually held international gathering of the ACI, which is the only international body in the global airport industry. As the event was held in Korea for the first time, it could showcase Korea's top-notch prestige in the world's airport industry. Under the slogan of 'Airport: Serving the Customer and the Community,' the ACI General Assembly had the presence of the world's airport experts. It was a meaningful gathering where balanced growth of global airports and measures for sustainable development were sought and shared, grabbing the attention across the world.



2014 General Assembly of ACI

Setting competencies and competitiveness as Northeast Asian air cargo hub

The 'TIACA's Air Cargo Forum' was organized by IIAC as the world's largest cargo and logistics forum, dubbed as the Fair of Air Cargo. It marked its 27th year and was attended by 3,000 air cargo-related individuals from global airports, airlines, and logistics companies, and ground handlers. They discussed on pending issues in the air cargo industry and shared their insights on future prospects. By successfully holding the world's largest international event on air cargo, IIAC could exert its competencies and competitiveness as the air cargo logistics hub in Northeast Asia while reaffirming the stronger prestige of Korea and its airport in the global air cargo industry.



TIACA Air Cargo Forum and Exhibition



Incheon Airport puts its top priorities on airport users' convenience.

"I could feel wide-ranging and convenient services everywhere at the airport which considered what customers would feel, befitting its No.1 rank in service satisfaction for 10 consecutive years."

Incheon Airport service has been globally recognized as No.1 in Airport Service Quality for 10 years. What distinguishes it from other international airports?

As I used the Incheon International Airport, it gave me an impression as 'an airport that strives to reduce users' inconveniences.' Its facilities were clean and convenient facilities could be found easily. It took less time for immigration and luggage pickup compared to other airports, which was convenient. With express buses and trains available from the airport to local regions, I could enjoy a comfortable travel without any worries about public transport.

IIAC is engaged in diverse eco-friendly activities under the vision to sophisticate low-carbon, eco-friendly management. What do you think of its green activities in a customer's point of view?

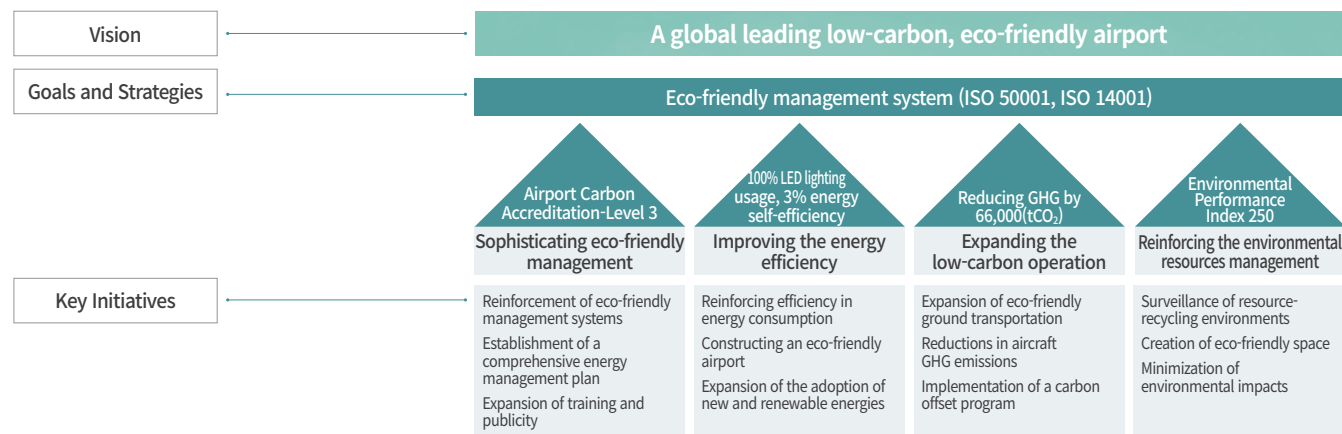
As I used the airport, I could see that it paid attention to tiny little details for energy saving like cross operation of elevators, automatic power control for bathroom lighting and corridors with the natural sunlight coming in. I think that if some PR campaign is waged to communicate on its specific efforts for energy saving and environmental protection, customers would be able to better recognize Incheon Airport as an eco-friendly one. I hope that the airport could be a global benchmark as a green airport with more proactive efforts and PR for its eco-friendly operation.

Low-carbon, Eco-friendly Management

Vision and Strategies for Low-carbon, Eco-friendly Management

IIAC set the low-carbon, eco-friendly management vision to become 'a global leading low-carbon, eco-friendly airport' based on GHG emission analysis and its future projections. Accordingly, it set four strategies: sophisticating eco-friendly management, improving the energy efficiency, expanding the low-carbon operation and reinforcing the environmental resources management. IIAC strives to achieve the goals under each strategy.

Vision and Strategies for Low-carbon, Eco-friendly Management



Setting the Roadmap for the Strategies

IIAC devised a specific roadmap for the four strategies to be implemented by 2020 in making efforts to make a low-carbon, eco-friendly airport.

Roadmap for the Strategies

Strategic Sectors	Target Areas	2014	2015	2016	2017	2020
Sophisticating eco-friendly management	Strengthening the eco-friendly management system	Acquiring the Airport Carbon Accreditation and the certification of ISO 50001		Designated as a green corporation	Sophisticating the energy management system	
	Comprehensive energy management	Operating the Committee on the Promotion of Energy Conservation, and intensifying guidance and oversight on energy management for partner companies and tenants				
	Intensified of training and promotion	e-Learnig	Building a promotion hall	Developing experts	Consulting on energy for overseas airports	
Improving the energy efficiency	Reinforcing efficiency in energy consumption	Diagnosing energy	Replacing freezers	75% LED lighting	Converting approach & runway lights into LED lighting	100% LED lighting
	Eco-friendly airport construction	Initiating the construction of a green airport with 1st Grade in being green and 1st Grade in energy efficiency				
	Expanding the adoption of new and renewable energies	PV 500kW	PV 240kW	PV 360kW	3 stages 4,124kW Geothermal energy 5,250kW	PV 1,970kW
Expanding the low-carbon operation	Intensifying eco-friendly transportation	Engaging in the hydrogen bus project	Providing incentives for eco-friendly vehicles	Expanding charging facilities	Introducing hydrogen-fuelled vehicles and charging stations	
	Reductions in aircraft GHG emissions	Low carbon hubs	Replacing the domestic AC-GPS (200 units), Replacing the domestic PC-AIR (44 units)			
	Carbon Offset Program	Carbon mileage	Introducing the carbon mileage point system for tenants	Initiating the afforestation project in forestry		
Reinforcing the environmental resources management	Environmental monitoring on resources circulation	Reducing pollution by strengthening the waste recycling and quality monitoring				
	Forming eco-friendly spaces	A project to improve the entrance zones for terminals		A project to form the World Peace Forest		A project to form a multi-culture zone
	Minimizing the environmental impact	Training and inspection to minimize the environmental impact				

GHG Emissions Reduction & Energy Conservation Promotion Committee

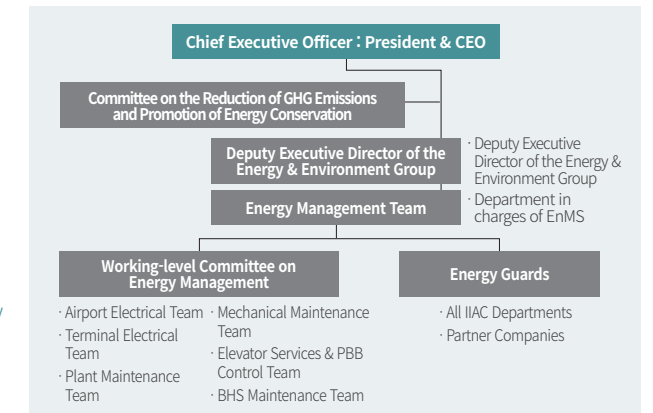
Seeking to efficiently manage the GHG emissions reduction and energy conservation, IIAC operates the GHG Emissions Reduction & Energy Conservation Promotion Committee. The committee holds quarterly meetings four times a year to analyze the performance on GHG reduction and energy conservation, and discuss on planning for making improvement over the short-and long-term run and relevant initiatives.

Major Functions of the "Committee on the Reduction of GHG Emissions and Promotion of Energy Conservation"

1. Matters related to the establishment and implementation of strategies and basic plans for low-carbon, eco-friendly management
2. Matters related to the analysis and evaluation of the progress of implementing low carbon, eco-friendly management strategies
3. Matters related to countermeasures against climate change and energy conservation to reduce carbon emissions
4. Matters related to education and publicity for low-carbon, eco-friendly management
5. Other matters deemed necessary by the chairman for sustainable low-carbon, eco-friendly growth

A system to initiate energy management

IIAC is striving to generate performance for energy management by forming a corporation-wide energy management system.



IIAC Organization for Reduction of GHG Emissions and Promotion of Energy Conservation



Review



GHG Emissions Reduction & Energy Conservation Promotion Committee

Agenda at the meetings of the GHG Emissions Reduction & Energy Conservation Promotion Committee in 2014 |

- Setting strategies to realize a low-carbon, eco-friendly airport
- Sophisticating the energy management system and acquiring certification
- Holding seminars on energy conservation for tenants and providing monitoring and guidance
- Promoting on energy conservation and extending rewards to individuals of merit
- Reviewing to replace freezers in passenger terminals into high-efficiency ones
- Researching on measures to adopt new and renewable energies including photovoltaics
- Introducing LED lighting and high-efficiency facilities
- Devising measures to implement the GHG emission trading scheme
- Training for Energy Guards and managers
- Reinforcing the operating of low-carbon green hubs
- Establishing measures to strengthen energy conservation efforts against a national electric power supply crisis
- Reviewing on low-carbon, eco-friendly R&D projects (developing heating & cooling supply devices for aircraft)

Review

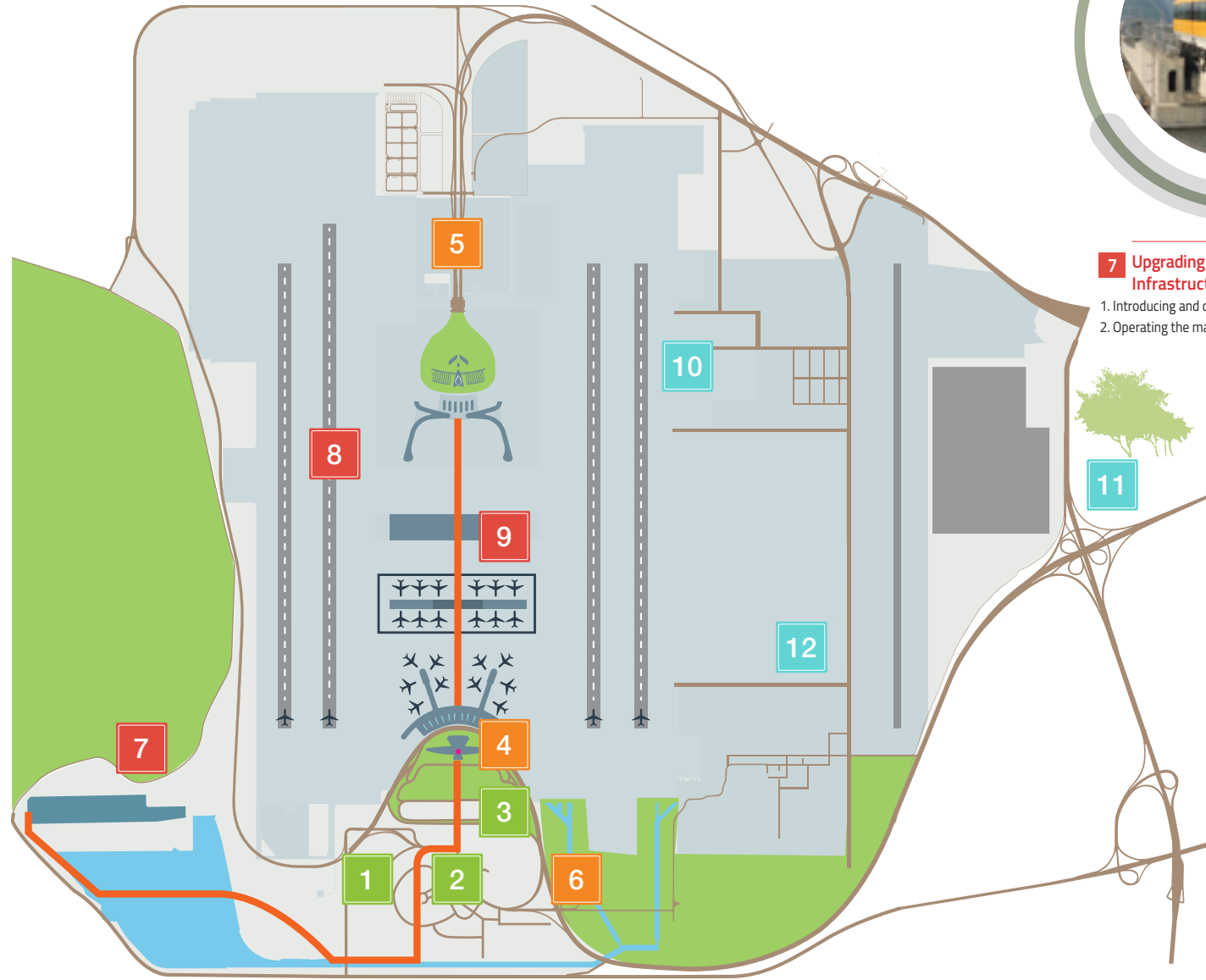


Working-level Committee on Energy Management

Working-level Committee on Energy Management |

The Working-level Committee on Energy Management is up and running that systematically manages the track records for energy usage and the current status of energy saved to achieve the goals for the GHG and energy target management system. The committee meetings are also held every quarter, that is, for four times a year to share the current status on the achievement of goals under the energy target management system in each department and measures to save it.

Incheon Airport Green Map



1 Reinforcing the Eco-friendly Environmental Management System (P.14)

1. Acquiring the ACI's airport carbon accreditation-level 3
2. Implementation of energy management system (ISO 50001)
3. Operating the environmental management system (ISO 14001)
4. Acquiring the preliminary certification for green buildings



2 Operating the Comprehensive Energy Management (P.16)

1. Intensifying of the energy management scope for tenants
2. Launching the Green Eco Smart advisory committee
3. Responding to the GHG emission trading scheme
4. Achieving the goals for the GHG & energy target management system



3 Intensifying of Training and Promotion (P.17)

1. Developing GHG specialists in the aviation industry in developing countries
2. Promoting Incheon airport as a low-carbon, eco-friendly one
3. Waging the energy conservation campaign
4. Giving rewards to individuals of merit for conserving energy



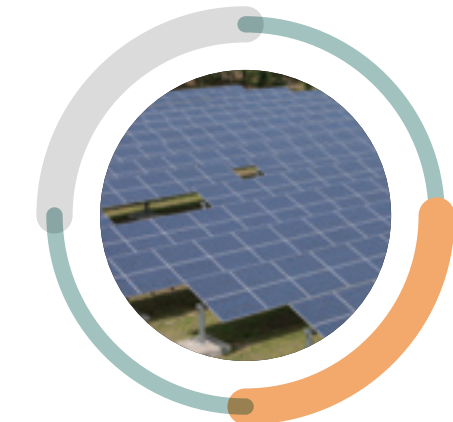
4 Strengthening the Efficiency in Energy Consumption (P.20)

1. Establishing measures to improve efficiency in energy consumption
2. Replacing lights with high-efficiency LED lighting
3. Checking out energy saving lifestyle



5 Constructing an Airport with Green Certification (P.22)

1. Making a roadmap for the construction of an eco-friendly airport
2. Managing the environment effectively through i-PIMS
3. Assessing the environmental impact and conducting post-environmental impact study



6 Expanding the Adoption of New and Renewable Energies (P.24)

1. Adopting new and renewable energies
2. Operating the energy storage system (ESS)
3. Establishing the energy information management system



10 Strengthening Environmental Inspection and Minimizing the Environmental Impact (P.34)

1. Operating the environmental monitoring system
2. Noise control
3. Air quality management
4. Indoor air quality management
5. Soil pollution management
6. Management of hazardous chemical substances
7. Management of asbestos
8. Inspection on environmental management
9. Training on environmental management



7 Upgrading of Eco-friendly Transportation Infrastructure (P.28)

1. Introducing and operating eco-friendly vehicles
2. Operating the magnetic levitation train



8 Expansion of the Carbon Offset Program (P.29)

1. Participating in the UN CDM
2. Operating the carbon offset program



9 Reductions in Aircraft GHG Emissions (P.26)

1. Managing the air traffic flow
2. Reinforcing the operating of low-carbon green hubs
3. Operating the AC-GPS (Aircraft Ground Power Supply)
4. Operating the PC-Air (Pre-Conditioned-Air)
5. Positioning as a Green Cargo Hub



11 Creating the Eco-friendly Space (P.33)

1. Forming the world peace forest
2. Environmental clean-ups in communities
3. Conserving the bio-diversity



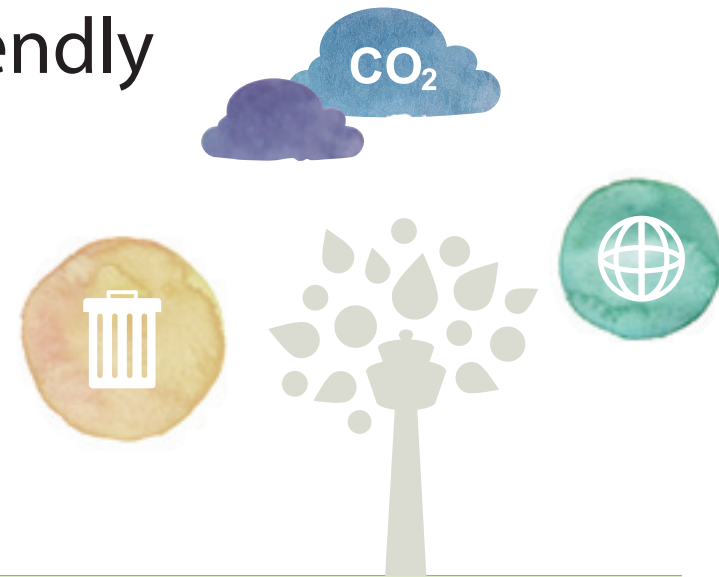
12 Making a Resource-cycling Eco-friendly Airport (P.32)

1. Conducting the environmental performance evaluation(EPI)
2. Integrated waste management of resource cycling type
3. Conserving and reusing water resources

Sophistication of Low Carbon Eco-friendly Management

Airport Carbon Accreditation of the ACI

LEVEL 3



IIAC reinforced its eco-friendly management system to meet global standards including the energy management system (ISO 50001), environmental management system (ISO 14001) and the Airport Carbon Accreditation-Level 3. IIAC is making utmost efforts to respond to the GHG(Green House Gas) & energy target management system and GHG emission trading scheme through comprehensive energy management. Driven by IIAC's strengthening training, its efforts and achievements in operating the low-carbon, eco-friendly airport have been praised externally.

- Strategy Goal**
Maintaining the Airport Carbon Accreditation-Level 3
- Strategy**
Sophistication of Low Carbon Eco-friendly Management
- Strategic Tasks**
 - 1 Reinforcing the Eco-friendly Environmental Management System
 - 2 Operating the Comprehensive Energy Management
 - 3 Intensifying of Training and Promotion

Reinforcing the Eco-friendly Environmental Management System

Acquiring the ACI's Airport Carbon Accreditation-Level 3

IIAC acquired Level 3 for the Airport Carbon Accreditation (ACI) organized by the ACI (Airports Council International), which is the highest in Asia, driven by its activities and performance in climate change response. The ACA-Level 3 is the third one acquired among Asian medium- to large-sized airports following Hong Kong International Airport in Chek Lap Kok and Indira Gandhi International Airport in New Delhi, India. Across the world, IIAC is one of the 13 medium- to large-sized airports to acquire the level in the world, a level that can be obtained only by world's highest level airports including the Heathrow, Munich, Schiphol, and Zurich airports. The Level 3 accreditation is particularly meaningful since it is the result of the efforts of the airport to have all of its stakeholders participate in its strategic carbon emissions management, including emissions not just from its own use of electricity and medium-temperature water but also from the use of such by tenants at the airport, not to mention emissions from airlines, aircraft and ground handlers' vehicles. IIAC plans to maintain the level undergoing the annual verification by continuously managing carbon emissions in operating the airport.

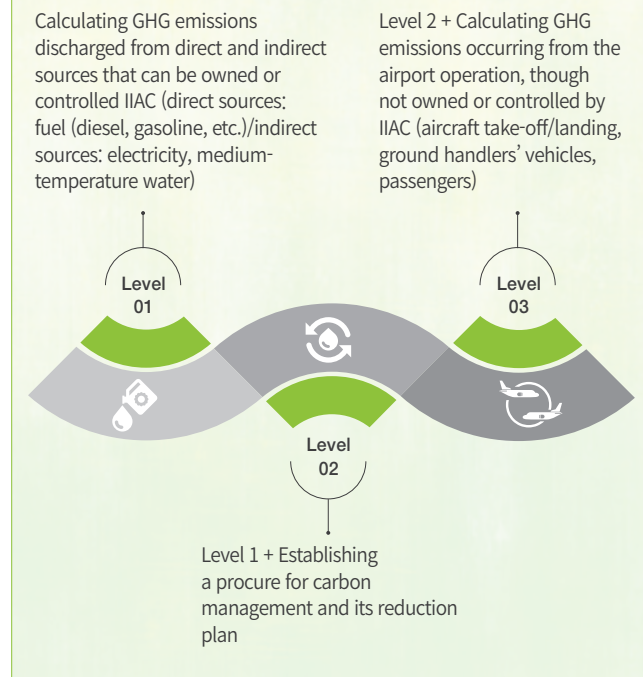


Acquired the Level 3 of the Airport Carbon Accreditation at the ACI General Assembly



ACA, Airport Carbon Accreditation

Administered by ACI (Airports Council International), ACA was first adopted in June 2008 at the ACI Europe Annual General Assembly. It began to be applied to the Asia-Pacific region in November 2011. ACA has four levels: Level 1 Mapping; Level 2 Reduction; Level 3 Optimization, and; Level 3+ Neutrality. Note, however, that Level 3+ involves the purchase of what is equivalent to one's Level 1 Mapping carbon emissions; thus, it is acquired only by small airports in Europe. Therefore, in a practical sense, Level 3 is the highest level for medium- to large-sized airports.



ACI's Airport Carbon Accreditation-Level 3

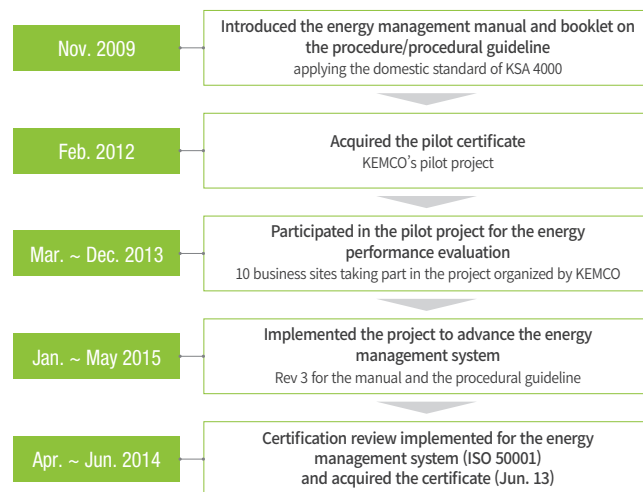
Implementation of Energy Management System (ISO 50001)

IIAC has participated in Korea Energy Management Corporation (KEMCO)'s pilot certificate program for the energy management system organized since October 2010, intensifying its energy management competencies steadily. In February 2012, IIAC became the world's first airport to receive a pilot certificate of the ISO 50001 Energy Management System, and acquired the official certificate in 2014.



Acquired the certificate for the energy management system(ISO 50001)

Milestones for Initiating the Energy Management System



Operating the Environmental Management System (ISO 14001)

IIAC has adopted and operated the environmental management system (ISO 14001) since 1998. IIAC undergoes follow-up management certification renewal audit to stably manage the environmental management system including setting environmental goals, identifying environmental and training, and improve the environment continuously. This ensures the conformity of the environmental management system.



Energy Management System (ISO 50001)



Environmental Management System (ISO 14001)

Acquiring the Preliminary Certification for Green Buildings

In order to construct a green airport that conserves resources and is eco-friendly with the second passenger terminal and T2 front facilities, IIAC conducted preliminary certification for green buildings for T2 front facilities as well as the second passenger terminal. As a result, the highest result for the evaluation (Green 1st Grade) was acquired. The preliminary green building certification is given through the inspection and evaluation of Korea Institute of Energy Research on land usage and transportation, energy and environmental pollution, materials and resources, water circulation management, maintenance, ecological environment and indoor environment.



Preliminary Certification for Green Buildings

Operating the Comprehensive Energy Management Intensifying of the Energy Management Scope for Tenants

IIAC signed an agreement for energy conservation and GHG reduction with tenants that consume a high amount of energy in the airport, striving to make Incheon Airport as a low-carbon, eco-friendly one. Beginning in 2014, IIAC has selected tenants with contracted electricity consumption of more than 75kW, and promotes effective energy management according to the Management Guidelines for Tenants' Electric Facilities.

Strengthening Monitoring and Oversight on Energy Management for Tenants

IIAC has broadened its scope of energy management to all entities at the airport beyond itself. IIAC has appointed energy managers for each tenant facility to suggest and manage energy conservation targets for tenant facilities. Moreover, site inspection and expansion of high-efficiency facilities are underway to Intensifying the tenants' awareness of energy conservation. Energy management seminars are held for the parties to voluntary agreements (11 companies) and staff of commercial facilities (20 companies) to share results on energy guidance for tenants and directions for energy management plans.



Energy Management Seminar for Tenants

Launching the Green Eco Smart Advisory Committee

IIAC launched the 'Green Eco Smart Advisory Committee' to successfully implement the 3rd phase construction as well as the new construction of the second passenger terminal in March 2014. The 'Green, Eco, and Smart' is the core concept for the second passenger terminal of Incheon Airport, implying 'an airport in harmony with the nature(Green), being sustainable and eco-friendly(Eco) and being safer and more convenient with cutting-edge technologies(Smart).' IIAC appointed 23 advisors that are most renowned in each field including landscaping, eco-friendly construction and ICT to more effectively realize the concept. The advisors are expected to prevent various setbacks that might arise in the middle of construction and process through proactive advisory activities, and contribute to the formation of seamless cooperation systems with outside parties.

Responding to the GHG Emission Trading Scheme

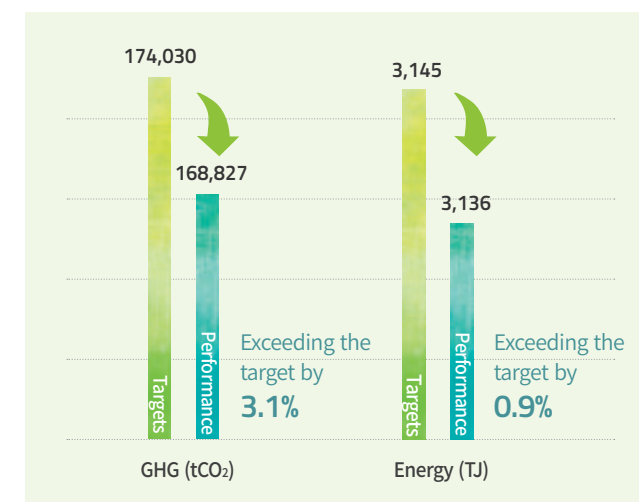
As the GHG emission trading scheme has been implemented since 2015, IIAC has established measures to respond to the implementation of the national GHG reduction policies. IIAC is doing the utmost to respond to the GHG emission trading scheme in multifaceted manners: minimizing the procurement cost for the trading allowance based on initial market analysis, reducing GHG by reinforcing energy conservation activities steadfastly, improving efficiency in new and renewable energies and energies per facility, and fully utilizing the early reduction allowance under the GHG target management system.



Achieving the Goals for the GHG & Energy Target Management System

IIAC has implemented the GHG & Energy Target Management System since 2010. Following the pilot operation in 2011, IIAC has confirmed on the reduction target volume in consultation with the government on an annual basis since 2012, and exceeded the reduction targets every year thanks to multiple efforts to make improvement to reduce GHG and energy emissions. In 2014, IIAC could surpass the GHG target management goal by 3.1% and the amount of energy use by 0.9% driven by proactive energy conservation activities including the introduction of high-efficiency facilities and more stringent guidance and monitoring for tenants in their energy use. These achievements came along despite the growth of passenger and flight volumes, the increase in tenants due to the 3rd construction phase and the new construction of accessory buildings. Moreover, IIAC developed a system for the GHG & energy target management to efficiently manage the amount of energy used and GHG emissions, integrating the corporation-wide GHG & energy performance management system. IIAC also monitors the amount of energy used in real time within the airport.

Status of fulfilling the GHG & energy target management system in 2014



Intensifying of Training and Promotion

Developing GHG Specialists in the Aviation Industry in Developing Countries

The 'Airport Greenhouse Gas Management Course,' an international training session in the environment sector jointly developed with the Ministry of Land, Infrastructure, and Transport is up and running. It was officially certified by the International Civil Aviation Organization (ICAO) under the UN as a representative of aviation member countries. The courses have six modules: GHG calculation criteria, quality assurance, and medium- to long-term GHG emission reduction plans. In 2014, the course on the ICAO-certified STP airport GHG management was conducted for 10 developing countries. IIAC transfers know-how on GHG reduction policies and energy management strategies of Incheon Airport for subsidiaries of Beijing Airport.

Promoting Incheon Airport as a Low-Carbon, Eco-friendly One

IIAC took part in the Eco-Expo Korea 2014 and the 2014 Low Carbon Green Lifestyle Campaign organized by the Ministry of Environment to share Incheon Airport's low-carbon, eco-friendly management performance with domestic and international stakeholders. An exclusive desk for purchasing eco-friendly products was installed within a promotion booth to facilitate green business exchanges with public and business procurement officers at home and abroad. Moreover, IIAC operated the Green Zone to promote itself as well as the low-carbon, eco-friendly Asian Games during the 2014 Incheon Asian Games. As such, IIAC extends utmost efforts to promote its low-carbon, eco-friendly management activities.



Eco-Expo Korea 2014

Waging the Energy Conservation Campaign

IIAC conducts a corporation-wide energy conservation campaign for efficient energy usage in summer and winter when the amount of energy use soars every year. Cool Biz (summer dress code designed to reduce A/C usage); no-driving on a particular weekday (one day per week) designated by employees in exchange for benefits such as parking fee D/C, pledges of energy conservation, and distribution of hand-held fans for the summer to promote energy conservation. Every November, the 'Energy Conservation Day' event is held throughout the corporation: posting energy conservation promotional banners near the airport and website banners, indicating energy conservation phrases on outdoor signage, conducting energy conservation training for all employees, doing in-house broadcasting, and conducting ad-hoc check to monitor on compliance with 'the no-driving on a particular weekday' for cars entering the IIAC building. Moreover, IIAC selects Energy Guards for all departments and partner companies to conduct a semi-annual workshop to raise awareness about the need for energy conservation in daily life and enhance expertise.



Energy Conservation Campaign

Giving Rewards to Individuals of Merit for Conserving Energy

IIAC gives rewards to individuals of merit for practicing energy conservation in their life as well as employees contributing to low-carbon, eco-friendly management after reviewing work-related facilities and improved performance in energy conservation in the airport operation. The scope of rewardees has expanded to include tenants from 2013 so IIAC gave commendations and rewards to two individuals in the 'Energy Conservation and Efficiency Improvement' category and one person in the 'Conservation Policies and PR Activities' category.

SPECIAL HIGHLIGHT

Winning the 2014 Low Carbon Eco Friendly Awards

IIAC's efforts and achievements for operating the low-carbon, eco-friendly airport have been highly recognized by governments and civic organizations from home and abroad.



Won the 2014 Korea Green Management Award

IIAC won the ministerial commendation from the Minister of Trade, Industry and Energy in the climate change response category at the 2014 Korea Green Management Award ceremony jointly held by the Ministry of Trade, Industry and Energy and the Ministry of Environment. It was attributable to having contributed to higher global competitiveness of domestic industries by dissipating and spreading green management in 2014 following 2010 and 2011.



Achieved the Green Logistics Award

That IIAC's Green Cargo Hub' project carried on from 2009 for eco-friendly logistical activities contributed to the development of green logistics was highly recognized. So, in 2013, IIAC won the Best Green Service Airport Prize at the Asian Freight & Supply Chain Award presented by Cargonews Asia, Asia's iconic logistics journal. In 2014, IIAC achieved the Grand Prize in green logistics for institutions at the 2014 Green Logistics Award ceremony organized by the Green Logistics Research Association.



Garnered the Presidential Commendation at the Global Green Management Excellence Award

IIAC carried out continued activities for climate change response including carbon reduction, introduction of new and renewable energies, operation of green carbon hubs, setup of eco-friendly transportation systems and comprehensive management of carbon emissions. As a result, it won the presidential commendation in the climate change response sector at the Korea Green Management Excellence Award during the 2014 Low Carbon Green Lifestyle Campaign co-organized by the Ministry of Environment, Incheon City and Korea Climate & Environment Network. The governmental commendation of the Korea Green Management Excellence Award is the most prestigious one in the domestic environmental sector awarded to individuals, institutions, companies and organizations that have contributed to the development of environmental technologies and climate change.

Won the Airports Going Green Award

The Airports Going Green Award is given to leaders that pursued sustainability by conducting eco-friendly management and saving energy in the global aviation industry from the American Association of Airport Executives (AAAE) and Chicago Department of Aviation. It has been awarded to airports, companies and individuals that have shown outstanding performance since 2008 on an annual basis. IIAC puts its name on the winners' list as the first East Asian airport for having proactively spread eco-friendliness to tenants in the airports and partner companies, striving to reduce energy and GHG.



Received the Platinum Prize of Vision Awards from League of American Communications Professionals(LACP)

IIAC has disclosed its low-carbon, eco-friendly management activities and performance to its stakeholders since 2009. As a result, IIAC's 2013 Green Report won the Platinum Prize of Vision Awards (Corporation Responsibility Report) from League of American Communications Professionals(LACP). The IIAC Green Report received perfect scores from 7 out of 8 evaluation categories of LACP, including report cover, report narrative, report financials and creativity, earning an exceptional score of 99 out of 100. This marks the second consecutive year for the Platinum Prize as Incheon Airport received the same prize last year. Vision Awards have been awarded by LACP(League of American Communications Professionals), a world-renowned PR and marketing survey institution, from 2002, and the scope of evaluation includes various text media, such as annual reports, magazines, advertisements, and websites of top global companies as exemplified by Fortune 500. This year, the competition was fierce like the previous year with more than 6,000 corporate candidates.



Improvement of Energy Efficiency

Introducing LED Lighting by 2020 Energy Self-sufficiency
100%, 3%



IIAC is constructing the 2nd passenger terminal in an eco-friendly way, while conducting technical diagnosis for energy using facilities to improve efficiency in energy consumption.

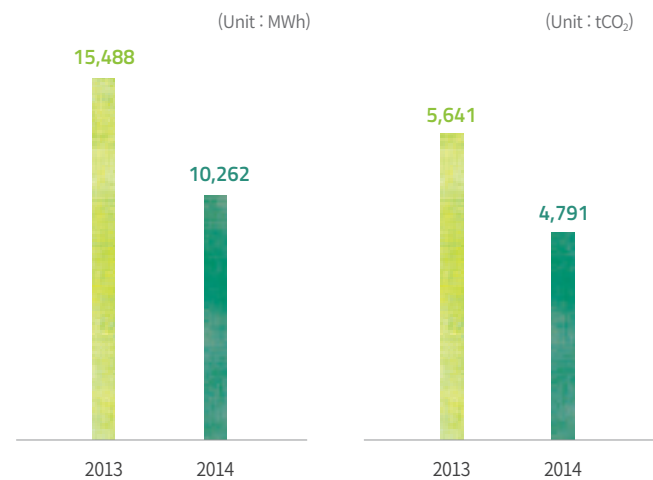
Moreover, IIAC is intensifying the basis for energy independence of Incheon Airport by expanding the introduction of new and renewable energies and utilizing the energy storage facilities and energy information management system.

Strengthening the Efficiency in Energy Consumption

Establishing Measures to Improve Efficiency in Energy Consumption

IIAC conducted energy diagnosis to explore energy conservation elements steadfastly as a low-carbon, eco-friendly airport. Energy conservation items and effects are analyzed through technical diagnosis on the energy occurrence and facilities, thus inducing the execution of measures to improve efficiency in energy consumption, while planning on energy conservation proactively. Through the energy diagnosis, IIAC devised measures for improvement by prioritizing items based on applicability and effectiveness of investment. In 2014, IIAC established and initiated specific measures for improvement to raise efficiency in energy consumption within the airport by devising measures for improving the airport electric power, machinery operating mechanism, differential turbines for resources recovery facilities, number of rotations for fans, and mechanisms to operate cold water pumps for mechanical and electricity buildings.

Amount of energy saved (Unit : MWh) Amount of GHG emissions reduced (Unit : tCO₂)



- Strategy Goal**
Introducing LED lighting 100% and Energy Independence by 3%
- Strategy**
Improvement of Energy Efficiency
- Strategic Tasks**
 - 1 Strengthening the Efficiency in Energy Consumption
 - 2 Constructing an Airport with Green Certification
 - 3 Expanding the Introduction of New and Renewable Energies



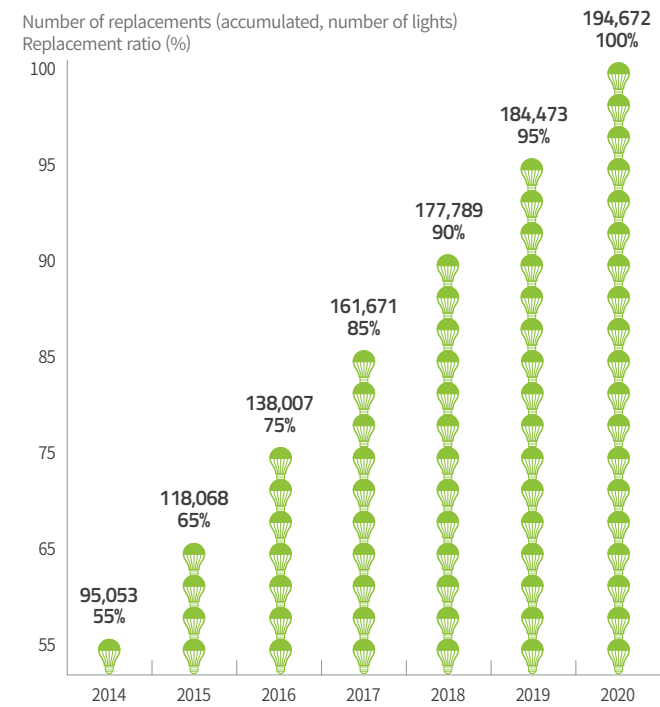
Replacing Lights with High-efficiency LED Lighting

As a part of an effort to conserve energy, IIAC is replacing the general lighting installed in the airport into high-efficiency LED lighting. This project kicked off in 2009, and 55% of all lighting has been replaced with LED Lighting by 2014. In 2015, IIAC plans to replace into LED Lighting by 65%, and it will reach 100% by 2020 through continued investment.



Replacing Lights with High-efficiency LED Lighting

Plans to replace with high-efficiency LED lighting



Checking out Energy Saving Lifestyle

IIAC encourages partner companies to conserve energy to spread awareness about its importance. Specifically, IIAC explores and implements measures to conserve energy for stronger energy efficiency and conducts activities to improve facilities and operation for energy. IIAC also induces them to proactively take part by offering incentives as well as support for their voluntary energy conservation by training on energy conservation, promoting the messages and improving facility and operating mechanism for energy. In 2014, 20 partner companies were selected that are involved in facility and system operation and maintenance, and their performance in acting out energy conservation in their daily life was reviewed. As a result, IIAC rewarded competent ones that excelled in energy management.

Replacing the Low-efficiency Pump Motors in Greywater Treatment Facilities

IIAC is striving to reduce the amount of electricity used by replacing the low-efficiency pump motors operated in greywater treatment facilities with high-efficiency ones. In 2014, two units were replaced in a pilot phase, and 10 units will be replaced by 2015.

Constructing an Airport with Green Certification

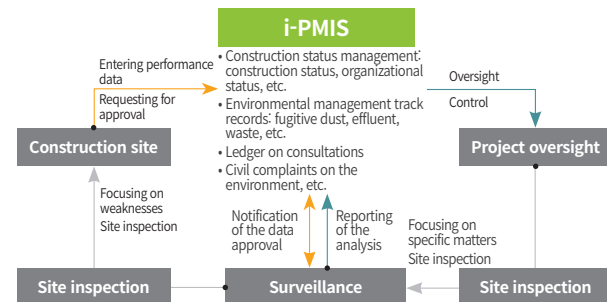
Making a Roadmap for the Construction of an Eco-friendly Airport

IIAC is making steady efforts to realize an eco-friendly airport through eco-friendly design and environmental management in the new 3rd phase airport construction and environmental impact evaluation management for the existing airport. Incheon Airport is undergoing its 3rd phase construction of eco-friendliness which is unique to itself. In other words, it will be an eco-friendly airport with the ecological, cultural and recreational convergence and 'an airport within a park' that is in harmony with the nature. Specifically, the green airport zone will be upgraded to be reborn as the 'Green Airport,' water-friendly spaces will be formed, and buildings where the nature flourishes will be there to stay. In the 3rd phase construction, the concept of 'Eco Airport' will be achieved as a low-carbon, eco-friendly and clean airport. To this end, efforts will be underway to make energy more efficient by scaling up new and renewable energies including PVs and thermal energy, using the natural sunlight for buildings and enhancing the heat insulation functionalities. Plans are also incubated to come up with a low-energy consuming airport to save about 40% of the energy compared with the existing terminals, induce carbon neutrality and increase the use of new and renewable energies. Based on the branding strategy of 'Green, Eco, Smart,' IIAC is initiating to embody a differentiated image as a low-carbon, eco-friendly airport and contain the Korean traditional culture at the same time.

Managing the Environment Effectively through i-PIMS

IIAC introduced an environmental management module to the PMIS for the first time in the world for integrated environmental management in the 3rd phase airport construction project in March 2013. IIAC, as a consequence, established the 3rd phase airport construction project management system in the name of 'i-PMIS(Incheon Program Management Information System).' The i-PMIS covers integrated management modules in the construction industry including not only environmental management but also safety, quality and process management on construction sites. Environmental management matters including consultations and waste from the environmental impact evaluation and air pollution that have been scattered throughout business sites are managed in an integrated manner via the i-PMIS. This ensures monitoring of construction sites and prevention of environmental accidents.

Operation Chart of the i-PMIS



GREEN · ECO · SMART AIRPORT

GREEN AIRPORT

Breathing with Nature, Green Airport in the Park

- Expanding Green Airport
- Creating Water Friendly Space
- Creation of living and breathing architecture

ECO AIRPORT

Eco-friendly, Low Carbon Airport (40% Energy Savings)

- Low energy consuming airport
- Carbon reduction
- New and Renewable Energy

SMART AIRPORT

High-Tech Airport with various contents

- Smart Service for Passenger immigration
- Strengthen ICT for airport operation, service
- Airport with culture and arts through enlarging soft power



Assessing the Environmental Impact and Conducting Post-Environmental Impact Study

In order to minimize the environmental impact resulting from airport construction, environmental impact assessment took place prior to the construction so that IIAC could predict environmental changes prior and post to the construction and lower the environmental impact thereof. Environmental impact assessment is consigned to an outside expert agency for enhanced professionalism and objectivity. IIAC conducts inspection on reservoir and ocean quality, malodor, radio trouble and soil pollution.

Particulate Matter Alert System in the Airport Area

In order to minimize the impact of fugitive dust that occurs on the 3rd phase airport construction site, IIAC installed and operates air quality measurement stations in three areas around the site. Air quality measurement stations measure particular matters (PM 10) and velocity, and provide measurement results aligned with PMIS to construction managers in real time. A PM alert is in operation to take fugitive dust reduction actions promptly once the results exceed the environmental threshold. On each construction site, a department, a surveillance & construction company in charge establishes and manages operational standards depending on its location and features.

Environmental Inspection and Management for the Airport

Construction	Airport Operation	Construction Site	Private Infrastructure
Internal environmental inspection Overall environmental management within the airport through environmental inspection by an internal department of IIAC	Special inspection Making the environmental impact zero through a special inspection • Water quality inspection de-icing • Study on air quality for movement areas, etc. • Site check and post-project check upon oil leakage, etc.	Environmental management for the construction site Site inspection for construction Training if it environmental preservation measures are to be implemented	Oversight of private enterprise on the Airport site Cooperative environmental management through the oversight of private infrastructure

Alert level for particulate matters

Threshold	Actions
Particulate matters (when exceeding 150µg/m ³ for 2 consecutive hours)	<ul style="list-style-type: none"> Strengthening measures to lower flying dust from construction near the measurement area (e.g. intensifying sprinkling for vehicle paths, stopping aggregate production/quarrying)
Velocity (over 8m/s)	<ul style="list-style-type: none"> Banning soil spill (dust materials) loading and unloading, and explosives blasting Banning outdoor cutting, rust removing, grinding or painting

Post Environmental Impact Study

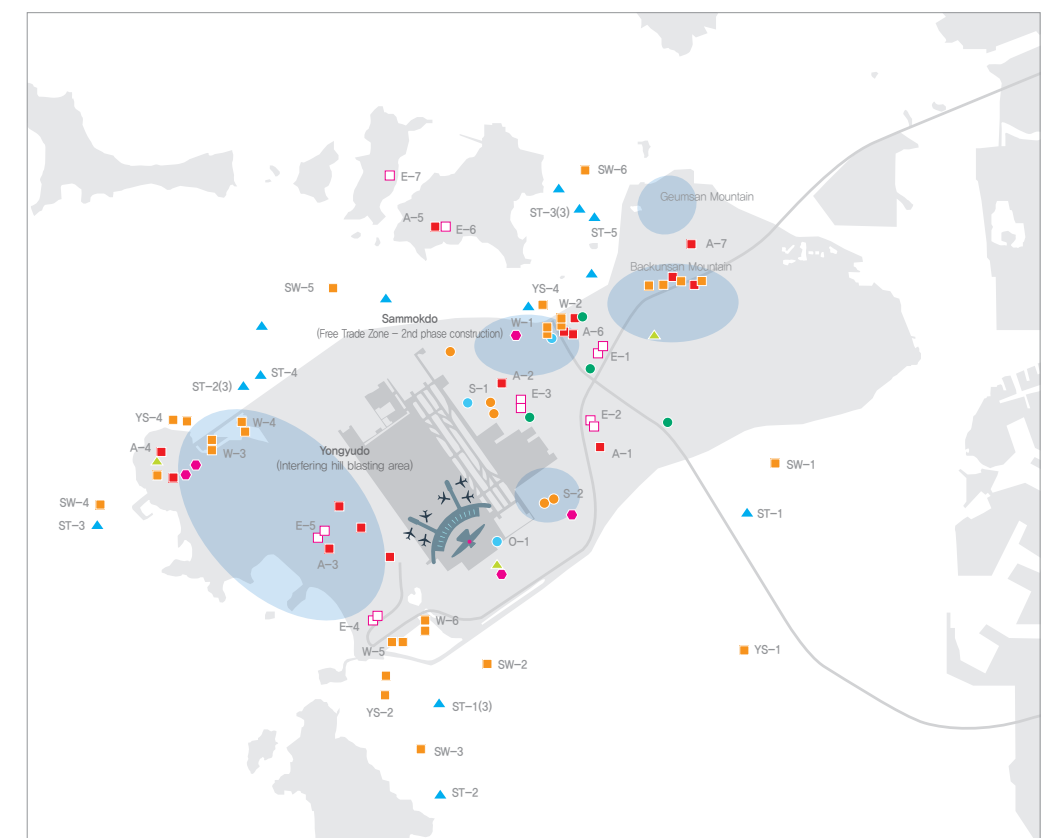
Environmental impact study spots for Incheon Airport	
Air quality	■
Ocean quality	■
Reservoir water quality	■
Ocean quality adjacent to reservoirs	■
Noise	●
Malodor	●
Radio trouble	□
Soil	●
Ground eco-system	●
Marine eco-system	▲

Construction to remove interfering hills	
Air quality	■
Water quality	■
Groundwater quality	■
Noise vibration	●

3 rd phase construction project for Incheon Airport	
Air quality	■
TMS Air quality TMS	▲
Water quality	■
Ocean quality adjacent to reservoirs	■
Noise vibration	●
Soil	●
Radio trouble	□
Marine eco-system	▲

Offshore construction for T-2 intersection	
Air quality	■
Water quality	■

JCT expansion construction at the airport entrances	
Study spots and marine eco-ecosystem	▲



SPECIAL HIGHLIGHT

IIAC's Efforts to Strengthen the Basis for Energy Self-sufficiency

IIAC strives to introduce new and renewable energies to strengthen the basis for energy self-sufficiency, and optimizing energy consumption by utilizing the Energy Storage System and the energy information management system.

Expanding the Introduction of New and Renewable Energies for Low-carbon, Eco-friendly Energy Production

IIAC proactively brings in new and renewable energy facilities including PVs and geothermal energy. IIAC installed PVs in greywater treatment facilities, workplace nurseries and substations, and a geothermal system of 520kW at the Human Resources Development Center to lower the amount of GHG.

Under its plan to adopt new and renewable energies, PVs and the geothermal system will be expanded continuously. IIAC plans to install solar panels at its long-term outdoor parking sections. Energy for heating and cooling supply will be enabled by the adoption of the geothermal system at the second passenger terminal under construction. As such, IIAC plans to continuously reduce GHG by tapping onto low-carbon, eco-friendly energies.

In-house adoption (including the 3rd phase's)



PVs

Amount of power generation
10,531MWh/year

GHG reduction
4,910tCO₂/year

Period : 2011 ~ 2020
Scale : 9.5MW



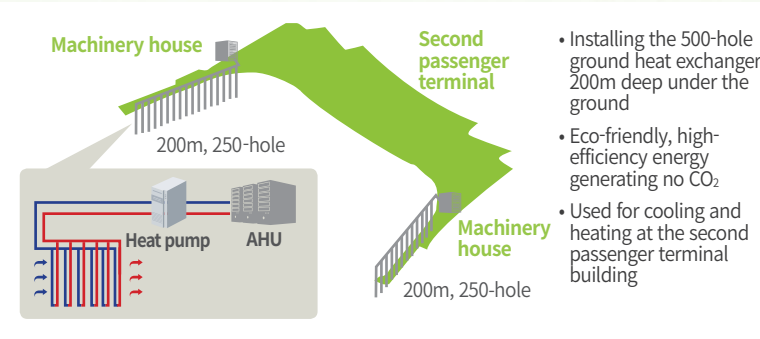
Geothermal energy

Amount of power generation
3,609MWh/year

GHG reduction
1,682tCO₂/year

Period : 2014 ~ 2020
Scale : 2,045usRT

Eco-friendly, high-efficiency geothermal system



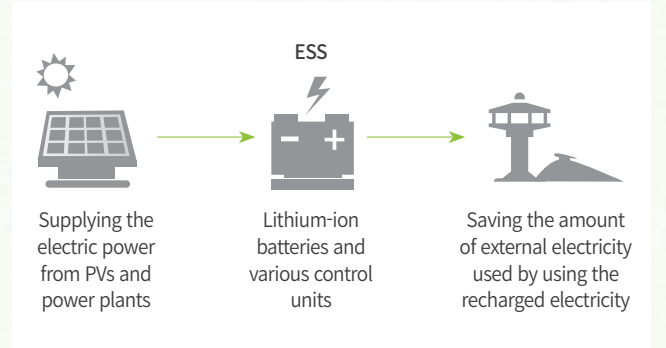
Solar Power Plant



Operating the Energy Storage System(ESS) to Tap onto New and Renewable Energy Resources 100%

New and renewable energy generation facilities including PVs control the consumption of fossil fuel, but irregular energy production due to climatic conditions such as cloud might induce a temporary overload for the transmission and distribution network. That is why the Energy Storage System (ESS) is needed where the energy produced is stored and then used regularly. IIAC runs the ESS of the largest scale as a public corporation to utilize new and renewable energy resources 100% in the capacity of 2MW. Energy efficiency can be boosted and the amount of electricity used can be lowered by levelling off the electric power load using the ESS. A lower burden on the power supply during peak hours also contributes to stabilizing the supply and demand of the electric power for the public.

Utilization rate of the ESS

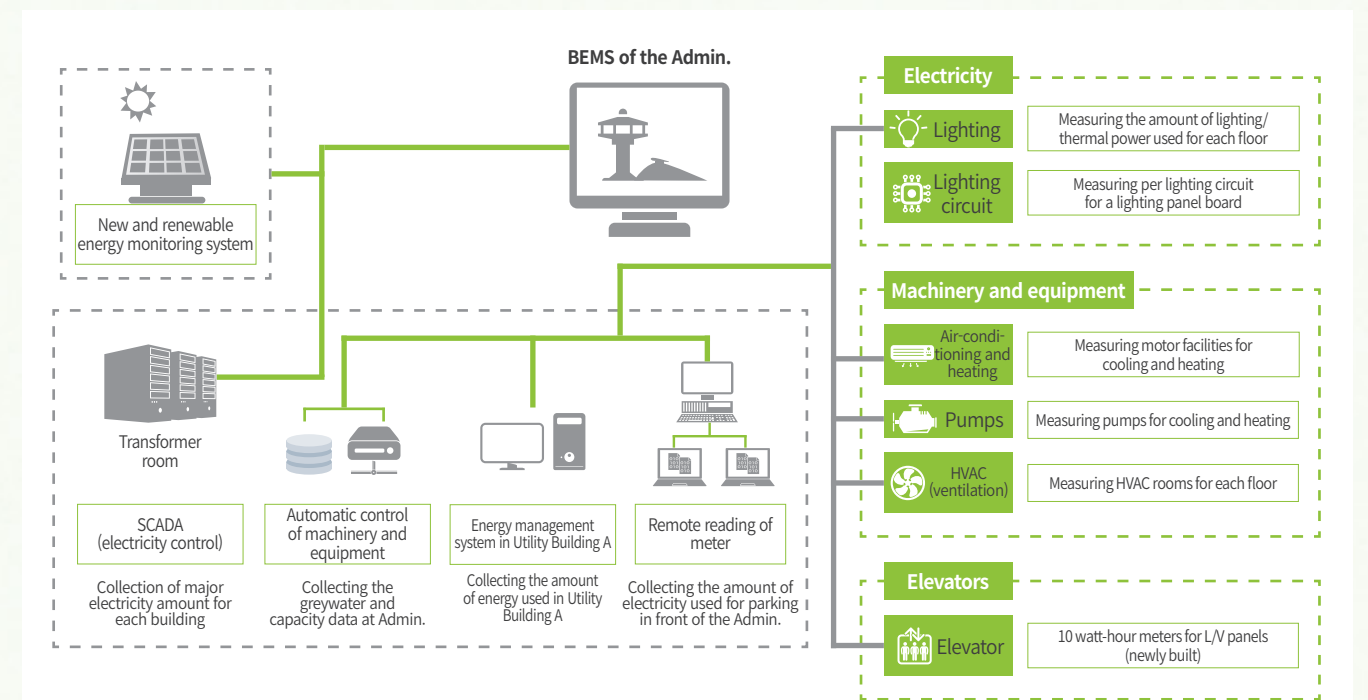


Establishing the Energy Information Management System for Optimal Energy Consumption

IIAC set up the energy information management system at its Admin. and Utility Building A to analyze the energy consumption records and come up with energy saving elements as it strives to manage energy information available. As integrated energy management and monitoring are made possible by connecting the energy information management system and the existing control system, IIAC is now equipped with a rational energy consumption basis. Energy is saved by optimally operating the heat source and HVAC system,

and electric power and lighting system through the energy saving control algorithms. Real-time monitoring on the indoor environmental conditions minimizes unnecessary energy consumption by recognizing circumstances where consumption is not necessary. The amount of energy consumed depending on the operating conditions of each facility is monitored so that the facility can be operated while maintaining the performance with optimal energy consumption.

Diagram of the Energy Information Management System



Expansion of Low Carbon Management

Reducing GHG by 2020

66,000tCO₂



IIAC is committed to lowering GHG by scaling up its low-carbon operation. IIAC has developed and operated technologies and systems to lower GHG emitted by aircraft in the air and on the ground, strengthened eco-friendly traffic infrastructure within the airport and expanded the carbon offset program.

Reductions in Aircraft GHG Emissions

Managing the Air Traffic Flow

IIAC launched a project to retrofit the air traffic control system, so retrofitted all the facilities in operation that were established when Incheon Airport was constructed including the Seoul Terminal Control Area, control towers at Incheon Airport and Gimpo Airport and ramp control. IIAC plans to establish a next-generation air traffic control system covering the second ramp control soon to be built at Incheon Airport in August 2017. The new airport control system will be equipped with Korea's first-of-its-kind cutting-edge air traffic flow management functions. The air traffic flow management system automatically provides optimized operational paths and isolation intervals to arriving aircraft depending on climate conditions for routes, operational performance of aircraft and flight plans. This ensures that aircraft could make a landing without staying in the air. By contrast, such elements as ground handling, routes and destinations for departing aircraft are considered in full swing to prevent any delays, thereby automatically managing permits for departure. As a result, flight safety can be secured and GHG emissions and noise can be lowered by reducing fuel usage by aircraft. This is expected to be significantly conducive for making an eco-friendly airport.



Air Traffic Control System

Strategy Goal

Reducing GHG of 66,000tCO₂

Strategy

Expansion of Low Carbon Management

Strategic Tasks

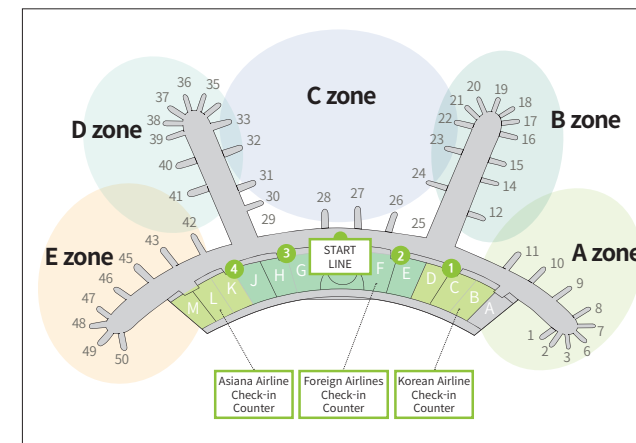
- 1 Reductions in Aircraft GHG Emissions
- 2 Upgrading of Eco-Friendly Transportation Infrastructure
- 3 Expansion of the Carbon Offset Program



Strengthening the Operation of Low-Carbon Green Aprons

IIAC minimizes aircraft movement through the apron and runway usage analysis in line with aircraft routes, thereby lowering the fuel consumption and GHG occurrence. IIAC designates and allocates apron areas closest to airlines' main runways to minimize aircraft movement on taxiways. IIAC has also minimized aircraft waiting and ground idle times. In 2014, the number of green aprons went up to 12.

Low-carbon Green Aprons Zone



- A zone : Exclusive for flights using the eastern runway (33/15)
- B zone : Priorities for flights using the eastern runway (33/15)
- C zone : For both flights using the eastern and western runways (33/15, 34/16)
- D zone : Priorities for flights using the western runway (34/16)
- E zone : Exclusive for flights using the western runway (34/16)

Forming a Culture to Save GHG and Energy

IIAC strives to form a culture to save GHG and energy in a daily life. IIAC manages the cooling and heating temperature and relaxes its dress code while making mandatory purchases for energy saving and green products. All employees' PCs are equipped with a power management program for office goods, so when not in use, their power is shut off to prevent electricity loss resulting from standby electric power.

A Culture to Save GHG and Energy

- Differentiating the indoor temperature for airlines' buildings and terminals
- Airlines' buildings: above 28°C in summer, below 18°C in winter
- Passenger terminals and concourses: above 25% in summer, below 20°C
- Wearing no neckties but short shirts for men in summer
- Plugging out home appliances that are not used
- Using the standby program for computers
- Turning off lighting and air conditioning during lunch time
- Replacing indoor lighting with high-efficiency one, and turning off one light

Operating the AC-GPS (Aircraft Ground Power Supply)

AC-GPS supplies power to aircraft parked on aprons after making delicate adjustments in voltage and frequency. As a substitute for the traditional APU (Auxiliary Power Unit), it not only saves fuel but also reduces GHG emissions by up to 98%. Incheon Airport is the only airport in the country to use AC-GPS. IIAC has adopted 116 units including the AC-GPS that was successfully developed locally since April 2014. By 2025, it plans to secure more than 150 units.



AC-GPS (Aircraft Ground Power Supply)

Operating the PC-Air (Pre-Conditioned-Air)

By supplying heating & cooling to aircraft parked in ramps, the system enables saving energy for aircraft and reducing GHG emissions. As of 2014, IIAC is operating 47 units of PC-Air, an aircraft heating & cooling supply system. In addition, IIAC plans to replace PC-Air units with domestic PC-Air systems through a future localization project.

Positioning as a Green Cargo Hub

IIAC launched its Green Cargo Hub project in 2009, and has conducted researches on lowering GHG in aviation and logistics by developing light-weight ULDs (Unit Loading Devices) with airlines and logistics companies at Incheon Airport and bio/photo-degradable vinyl for air freight packaging. Light-weight ULDs made of cloth or synthetic resins are about 40% lighter than traditional containers. The bio/photo-degradable vinyl has a dramatically shorter natural decomposition period of less than a year without having to be landfilled. IIAC is supporting the distribution of light-weight ULDs, and bio/photo-degradable vinyl to achieve partnerships for mutual growth with airlines and logistics companies for green logistics. IIAC is firming its presence as a leading airport in achieving 'green logistics' by developing the brand of 'Green Cargo Hub.' As a consequence, IIAC was awarded the Grand Prize in the Public Corporation Category of the Logistics Grand Prize Award at the 2014 Green Logistics Award presented by the Green Logistics Research Association.

Upgrading of Eco-friendly Transportation Infrastructure

Introducing and Operating Eco-friendly Vehicles

IIAC has secured eco-friendly transport vehicles for passengers, resident staff, and residents in neighborhoods. IIAC has built 18.4km bike trails between the airport and new towns in neighborhoods to encourage its resident staff and residents to use bicycles to commute to work. IIAC has replaced all of its business vehicles with compact cars except special purpose vehicles. It is also running electric vehicles and hybrid cars as a part of its green car pilot project. In 2014, IIAC launched a demonstration project where hydrogen fuel cell buses using the alternative energy (hydrogen) generating no GHG is used, running two hydrogen fuel cell buses as shuttle buses to reduce GHG emissions.

Operating the Magnetic Levitation Train

IIAC plans to open the 1st phase route (6.1km) for the magnetic levitation train running from the traffic center to Yongyu Station in 2015. The magnetic levitation train refers to a train levitated on a rail using the magnetic power, and with no contact between the wheels and the rail, there is little noise and vibration and a high speed can be maintained. The train will be constructed in three stages by 2020, starting with the airport traffic center to Yongyu Station in the 1st phase, moving onto the 2nd phase of 9.7km from the vehicle station to the international business complex, and the 3rd phase of 37.4km from the international business complex to Incheon Airport.



A Magnetic Levitation Train



Expansion of the Carbon Offset Program

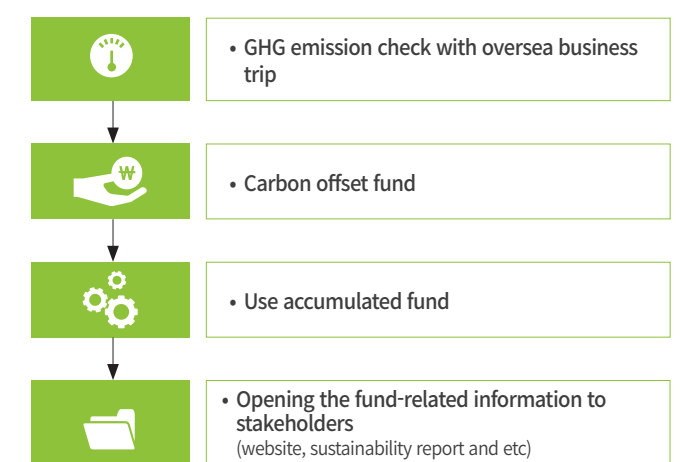
Participating in the UN CDM

IIAC has participated in the Clean Development Mechanism (CDM) where advanced countries conduct a GHG reduction project in developing ones and a part of their achievement under the project is considered to be equivalent to their performance in lowering GHG, and secures the carbon trading right thereof. In 2012, it registered an outdoor LED lamp project, and in 2014, it has additionally registered the street lighting replacement project with LED lighting for a passenger terminal to secure the carbon trading right.

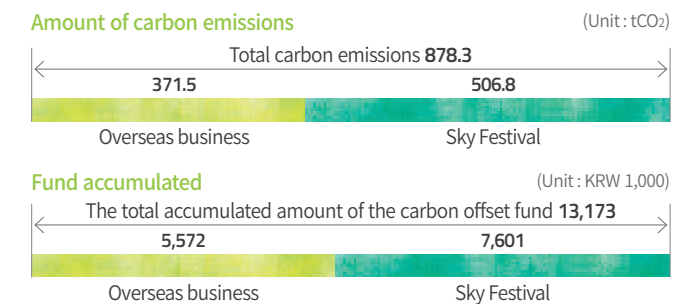
Operating the Carbon Offset Program

IIAC began to implement a carbon offset program in April 2013 aligned with social contribution efforts. IIAC accumulates a green fund of KRW 15,000 for the emission of 1tCO₂ generated for a business trip by establishing its own carbon emission calculation program. The green fund is accumulated from carbon emissions generated from the event of the Sky Festival, a representative airport of Incheon Airport from 2014. The fund raised is used for social contribution activities including energy expenses for the socially vulnerable. In 2014, the total amount of the carbon offset fund worth 371.5tCO₂ reached KRW 5.57 million thanks to the overseas business trip-aligned carbon offset program. For the carbon emissions generated in the Sky Festival organized for local residents while wishing for the development of Incheon Airport as a world-class one, an additional amount worth KRW 76 million, that is, 506.8tCO₂ was accumulated as the carbon offset fund through the carbon offset program.

Employees' Overseas Business Trip-aligned Carbon Offset Program



Current status of the accumulated amount for the carbon offset fund in 2014



Light-weight Air Cargo Container

SPECIAL HIGHLIGHT

Incheon Airport Carbon Footprint in 2014

IIAC identifies GHG directly and indirectly emitted from tenants, airlines, ground handling companies, and passengers as well as the operation of Incheon Airport and ensures their optimal management.



Total GHG emissions in the airport area Emissions: as of 2013 (Unit: tCO₂)

Scope	Classification	2009	2010	2011	2012	2013
1	IIAC'	14,532	14,498	16,228	18,141	19,823
2	Indirect energy (electricity, medium-temperature water)	152,738	156,558	148,318	149,662	147,594
3	Tenants					
	IIAC					
	Airport ground handling companies	869,349	962,085	1,000,180	1,060,601	1,091,227
	Passenger movement					
Total amount of airport carbon management		1,036,619	1,133,141	1,164,726	1,228,404	1,258,644

* Based on the ACI data

Incheon Airport's carbon Footprint in 2014



Reinforcement of Environmental Resources Management



Goals for Achieving the Environmental Performance Index by 2020

250



IIAC has strengthened the circulation of resources and environmental monitoring to intensify the management of environmental resources, and set more stringent internal standards than the legal thresholds to minimize the environmental impact. IIAC also strives to form eco-friendly spaces and conserve bio-diversity within communities.

Making a Resource-cycling Eco-friendly Airport

Conducting the Environmental Performance Evaluation(EPI)

IIAC does the utmost to optimally allocate limited resources based on strength/weakness analyses on environmental management activities, seeking to achieve efficient environmental management. Under a goal to secure transparency in environmental management, IIAC provides objectives and systematic environmental information to stakeholders in real time on the website. IIAC also established an evaluation system in compliance with the International Organization for Standardization (ISO) and the '2006 Environmental Performance Evaluation Guideline' of the Ministry of Environment. The objective here is to induce corporate-wide environmental management activities and achieve continued environmental enhancement. IIAC is striving to achieve 250 points for the EPI by 2020.

Results of Environmental Performance Evaluation



Integrated Waste Management of Resource Cycling Type

IIAC operates the resource classification and disposal facility enabling integrated management of designated waste whose treatment procedure is somewhat tricky, and resource recovery facilities (incinerators) of fluidized-bed incineration type with strong efficiency in incineration. On the resource classification and disposal facility, efficiency is achieved through integrated waste management, ranging from check-in and check-out of various types of waste resulting from the airport operation, and storage of waste by type. IIAC is taking the lead in realizing a resource cycling-type eco-friendly airport that supplies waste heat to local power plants.



Utilization of waste heat at resource recovery facilities



Initiating to Set up the Eco-Factory

IIAC devises measures to utilize waste generated from the airport operation for making products. IIAC seeks to establish the Eco-Factory that reduces the use of materials necessary for the airport operation and produces recycled products by reusing and recycling waste. In 2015, IIAC plans to analyze the whole waste cycle covering waste generation, storage and treatment, which might occur in the airport operation and construction. IIAC plans to explore targets for turning waste into resources and review on the possibilities of resource conversion and recycling of waste and unused products.

Conserving and Reusing Water Resources

IIAC strives to utilize water resources efficiently and minimize water pollutant discharges. Effluent discharged from the airport area is treated in greywater supply lines located in the international business complex and produced as greywater, which is then recycled for cleaning at restrooms, cooling/cleaning for machinery and landscaping. Environmental management staff measures the water quality near Incheon Airport to prevent water pollution. IIAC operates the early rainwater facilities to minimize water pollution that might occur in airport runways during rainfall. Waste sludge discharged from treating early rainfall is wholly consigned to a professional treatment company.

Managing water pollutants at greywater supply lines

(Unit: ppm(mg/L))

Classification	Legal standard	IIAC's standard	2012	2013	2014
COD	20	10	4.50	4.70	3.00
BOD	10	6	0.70	1.30	0.90
SS	10	6	0.70	1.00	0.80
TN	20	10	4.14	5.03	4.97
TP	2	1	0.21	0.27	0.25

Creating the Eco-friendly Space

Forming the World Peace Forest

IIAC does the utmost to conserve the natural eco-system by forming the World Peace Forest around the adjacent reservoir park. The World Peace Forest was created on the acreage of 190,000m² in 2009, which contributes to lower GHG, touts noise absorbing and shielding functions, and provides a recreational space for local residents. IIAC plans to expand the scale up to 470,000m² by 2017, further contributing to the conservation of the natural eco-system and formation of communities with the creation of the World Peace Forest.

Environmental Clean-ups in Communities

Marking the 2014 World Environment Day, IIAC conducted an environmental clean-up with partner companies around a lock gate park off the southern part of Incheon Airport. IIAC plans to regularly organize the 'environmental clean-up to celebrate the World Environment Day' and spearhead the efforts to improve the environment in adjacent areas.



At the Environmental Clean-up Event

Strategy Goal
Achieving the Environmental Performance Index of 250

Strategy
Strengthening of Environmental Resources Management

Strategic Tasks

- 1 Making a Resource-cycling Eco-friendly Airport
- 2 Forming the Eco-friendly Space
- 3 Strengthening Environmental Inspection and Minimizing the Environmental Impact

Conserving the Bio-diversity

IIAC's environmental impact study quarterly held every year as a part of its efforts to conserve the bio-diversity is to identify the current status of flora and fauna eco-system around the airport. Adequate measures for management are in place when protected species are discovered. In 2014, IIAC could identify the habitation of black-headed gulls designated as Grade II on IUCN Red List of Threatened Species, and took protective actions by installing bollards on their habitat until the end of their egg spawning season.



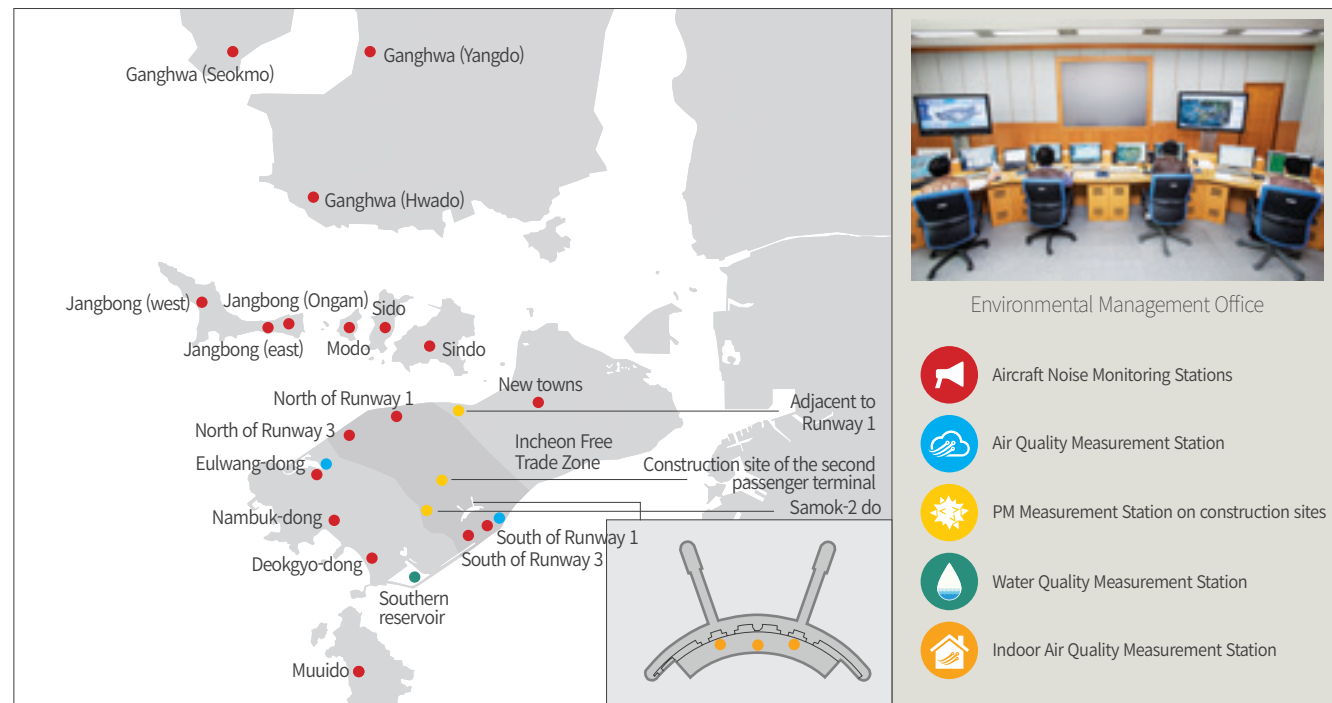
A Nest of Black-headed Gulls

Strengthening Environmental Monitoring and Minimizing the Environmental Impact

Operating the Environmental Monitoring System

IIAC operates the environmental monitoring system for 24/7 monitoring for aircraft noise, air, water and indoor air quality. The Environment Management Center located in AICC (Airport Information and Communication Center) analyzes the data sent from measurement stations and monitoring system continuously, and monitors environmental changes in the airport area and adjacent ones. Measured data are utilized as basic materials for airport expansion projects for the future as well as data for decision-making upon setting policies for environmental upgrade for the airport.

Operating the Environmental Monitoring System



Vehicles for Environmental Study



Noise Measurement & Air Quality Measurement



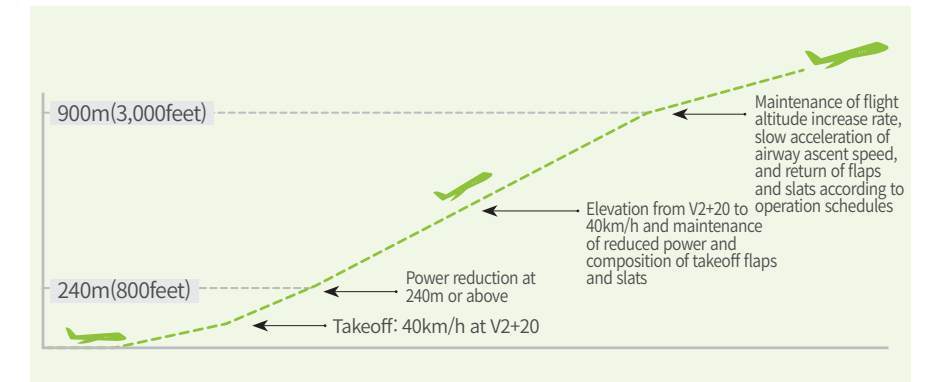
Indoor Air Quality Measurement



Noise Control

IIAC is operating a real-time aircraft noise measuring network to analyze the noise impacts of its airport operations based on precise data resulting from the airport operation, and the analysis results are shared with airlines and others. IIAC has introduced NADP (Noise Abatement Departure Procedures) for aircraft operations with minimized noise. At night, planes are detoured to avoid flying over residential areas. The noise figures are transparently disclosed on the IIAC Website and the 'Airport Noise Information System (www.airportnoise.kr).'

NADP1 : Noise Abatement Departure Procedure 1



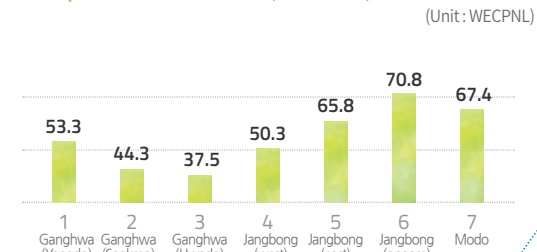
Countermeasures against Aircraft Noise

Currently, IIAC is implementing aircraft noise countermeasures for Bukdo-myeon, which is within the Incheon Airport noise impact zone. IIAC has installed sound-proof walls and air conditioners for local residents, pays for their monthly TV license fees, and installs sports facilities. The Airport Noise Abatement Committee is held periodically to gather feedback from local residents and specialists as IIAC is doing the utmost to implement countermeasures against aircraft noise.

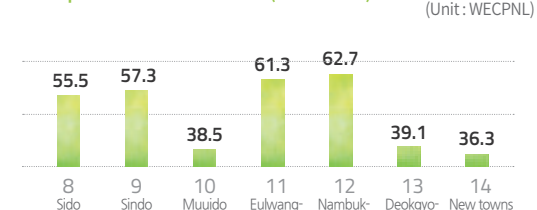
Noise Countermeasure Areas Status (as of 2020)

- Noise Countermeasure Adjacent Area : Over 75-70 WECPNL
- Noise Countermeasure Area : Over 75 WECPNL

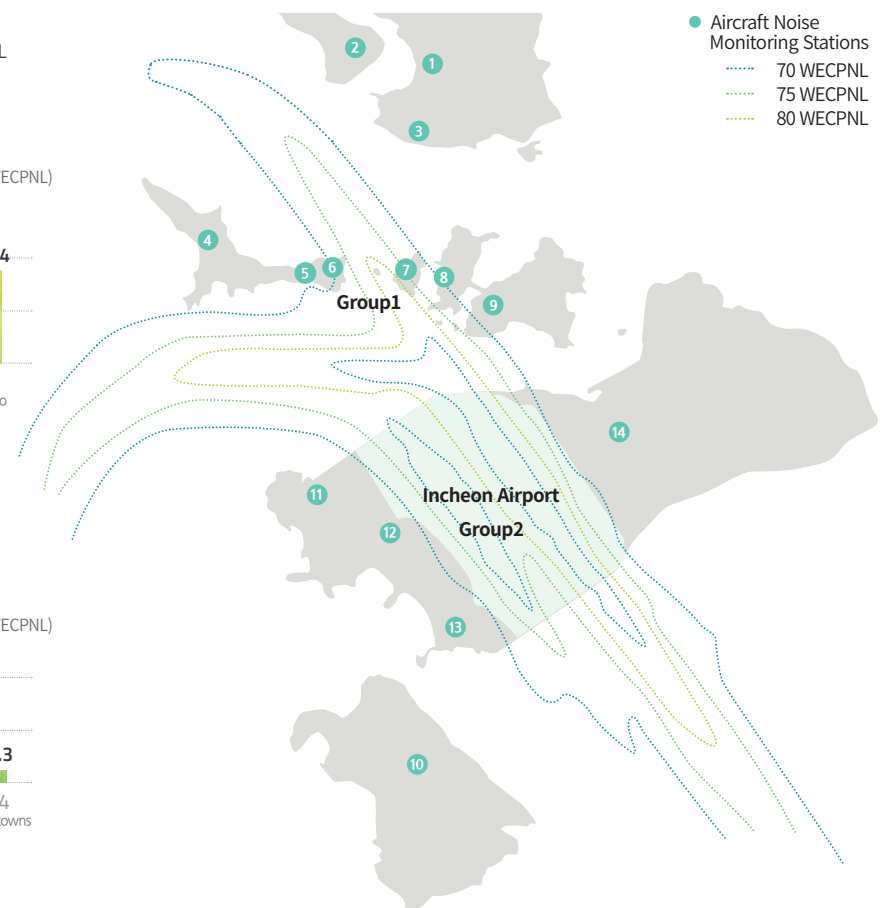
Group 1 Area Aircraft Noise (as of 2014)



Group 2 Area Aircraft Noise (as of 2014)



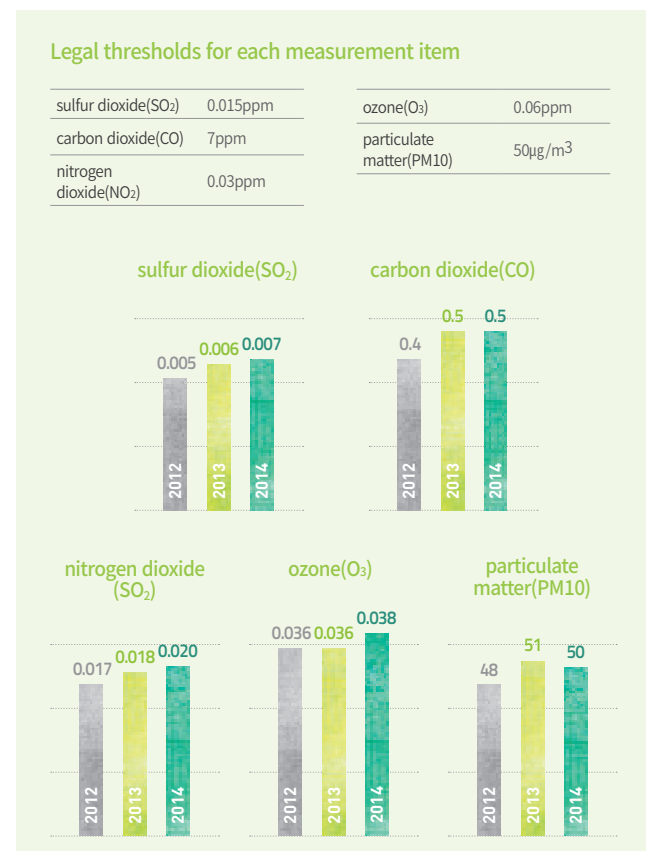
* Based on 2014



Air Quality Management

IIAC is striving for air quality management by installing cutting-edge exhaust gas treatment facilities at the resources recovery facilities (incinerators) discharging air pollutants. In order to identify the air impact on surrounding areas resulting from the airport operation, IIAC is operating air quality monitoring systems in three locations: Incheon Free Economic Zone, greywater treatment facilities, and Eurwang-dong. The systems monitor the concentration of five key pollutants, that is, SO₂, CO, NO₂, O₃, and PM₁₀ in said locations round the clock. IIAC will continue its monitoring efforts and do its best to improve air quality in and around the airport.

Air Quality Management



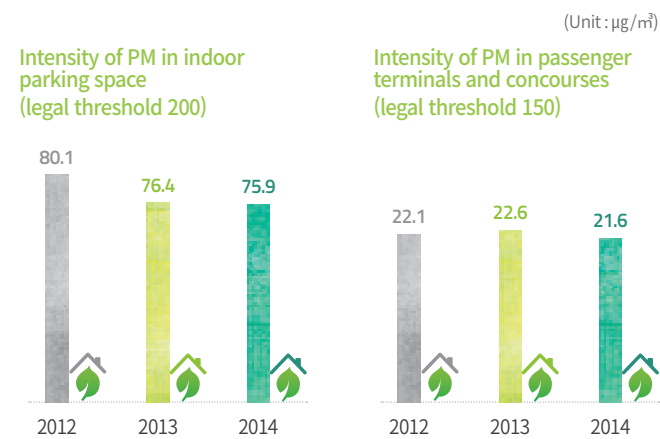
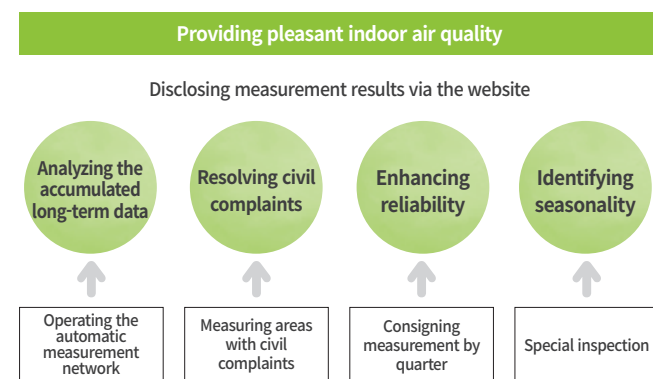
Operating Air Pollution Prevention Facilities

Classification	Legal thresholds	Management criteria	2012	2013	2014
Dirt(µg/m ³)	20	10	1.07	1.36	0.99
Sulfur oxide(ppm)	30	20	1.04	0.16	0.31
Nitrogen oxide(ppm)	70	50	3.31	6.24	5.55
Carbon monoxide(ppm)	50	30	4.35	5.95	4.88
Hydrogen chloride(ppm)	20	10	0.98	1.01	1.17

Indoor Air Quality Management

IIAC installed measuring devices for the indoor air quality in three spots in the passenger terminal and conducts real-time monitoring to provide a pleasant indoor space for airport patrons. Indoor air quality, in fact, is measured once a quarter for 20 waiting rooms in passenger terminals and concourses, and once a year for 12 spots, that is, indoor parking spaces in the traffic center and shuttle train platforms by consigning it to an outside expert company. Air quality is managed under IIAC's more stringent standards than the legal standard suggested in the Indoor Air Quality Control In Public Use Facilities, etc. Act, and the measurement results are disclosed in real time on the website.

Indoor Air Quality Management



Soil Pollution Management

IIAC performs regular inspections of soil contamination on a yearly basis, and conducts annual inspections on facilities that could cause soil contamination according to the legal inspection cycle. It pays the utmost attention to aircraft fuel supply facilities, aircraft refueling systems, and emergency generators designated by the law as especially important management facilities to prevent oil leak at the airport.



Management of Asbestos

IIAC carries out asbestos inspections on buildings and facilities on a yearly basis. Subsequently, it has taken proper management plans to protect facility users' health and create pleasant living conditions. IIAC minimizes the use of materials containing asbestos for its various buildings to realize 'zero damage' to resident staff and airport patrons.

Management of Hazardous Chemical Substances

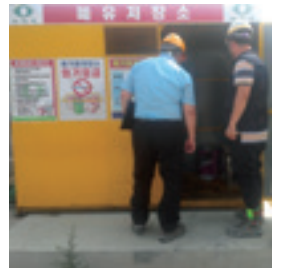
IIAC maintains figures on the possession and usage status of chemical materials, toxic materials, and materials needed to counter accidents. It keeps MSDSs (Material Safety Data Sheets) at the sites, doing its very best to prevent environmental accidents caused by toxic chemicals by urging all personnel at the airport to comply with all the relevant regulations.

Installing and Operating Aircraft De-icing Pads

IIAC spreads de-icing agents on the aircraft's main body surfaces to remove and prevent frost, ice and snow. Waste from the de-icing operations is collected at de-icing pads for safe disposal without harming the environment. Currently, eight pads are in operation, each of which is equipped with 8 special tanks designed to collect and store the waste until a professional outside business takes care of it.

Inspection on Environmental Management

IIAC formed an exclusive environmental team for steady inspection on environmental management. The management scope consists of internal inspection, daily & special inspection and private infrastructure inspection. Suggestions and feedback on environmental management are attentively listened to and reflected through meetings with site managers during inspections.



Inspection on Environmental Management

Training on Environmental Management

IIAC developed the e-learning program to boost eco-friendly awareness among resident staff and fully utilizes in educating them. Starting from 2014, IIAC has expanded its environmental training to those working for its partner companies and construction companies engaged in the 3rd phase construction projects. For those from home and abroad and who would like to pay a visit to IIAC's greywater facilities and environment monitoring systems, IIAC provides on-site environmental education and shares with them its environmental management experiences.

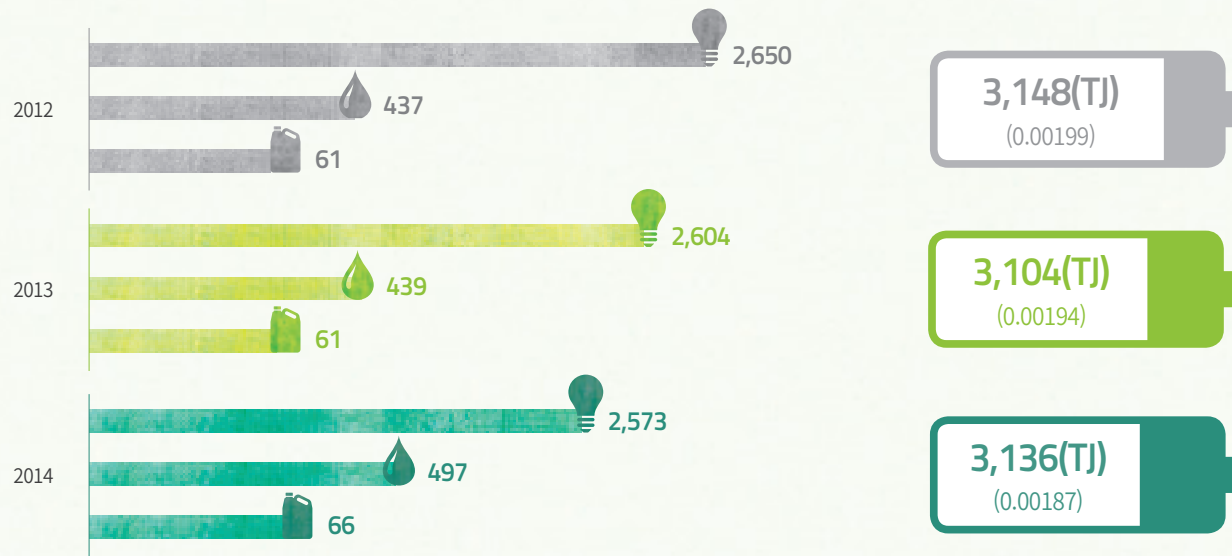


Aircraft De-icing

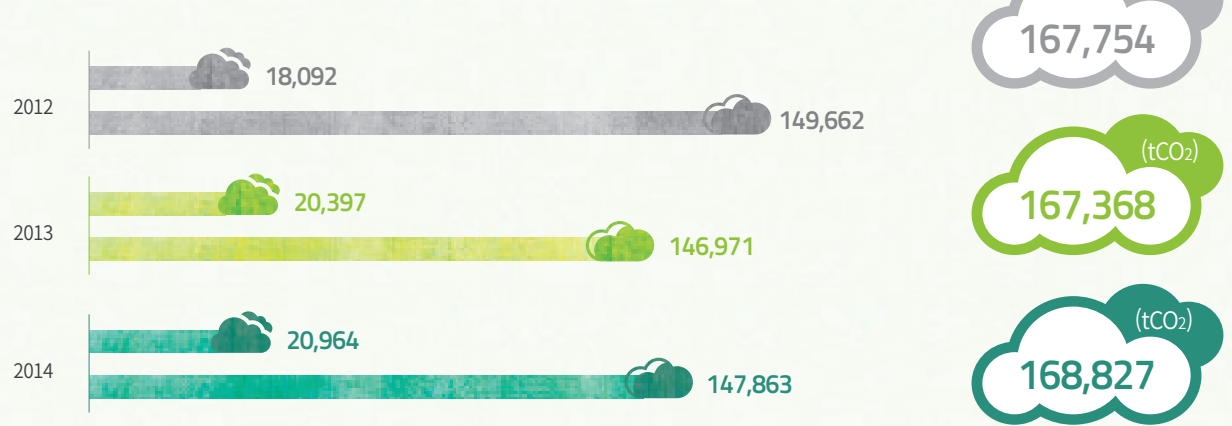
SPECIAL HIGHLIGHT

Incheon Airport's Consumption of Resources and Circular Flow

Amount of energy used

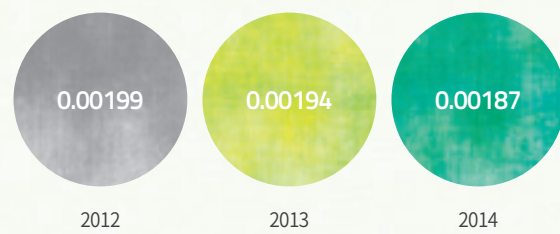


GHG emissions



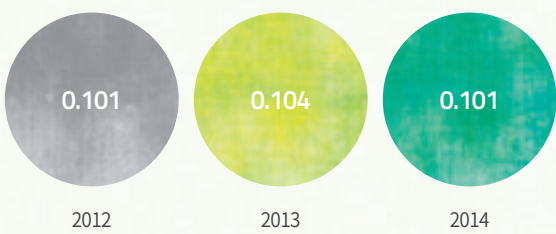
Amount of energy basic unit used

(Amount of use/sales volume, TJ/KRW million)



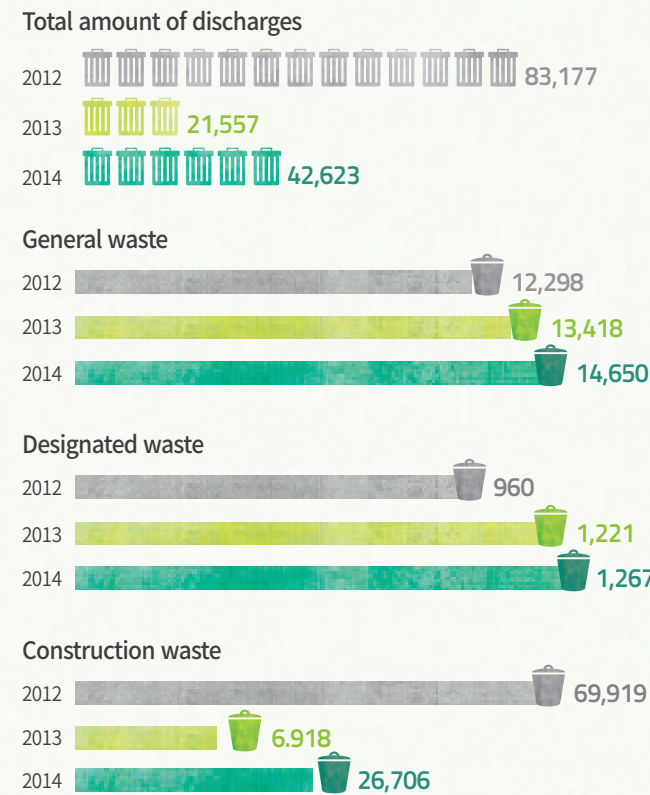
Amount of basic unit for GHG discharged

(Amount discharged/sales volume, tCO₂/KRW million)



Status of waste discharged

(Unit : ton)



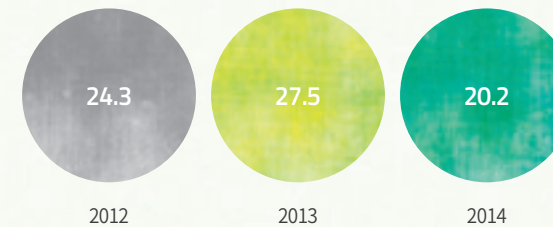
Status of using water resources

(Unit : m³)



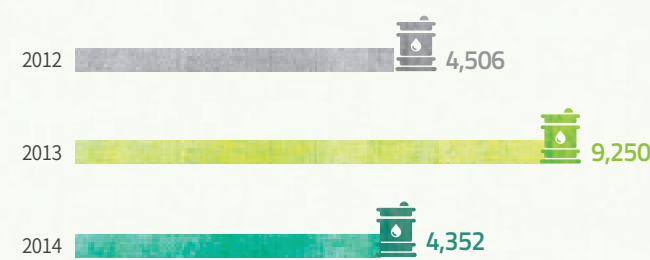
Amount of basic unit for water used

(Unit : L/number of passengers)



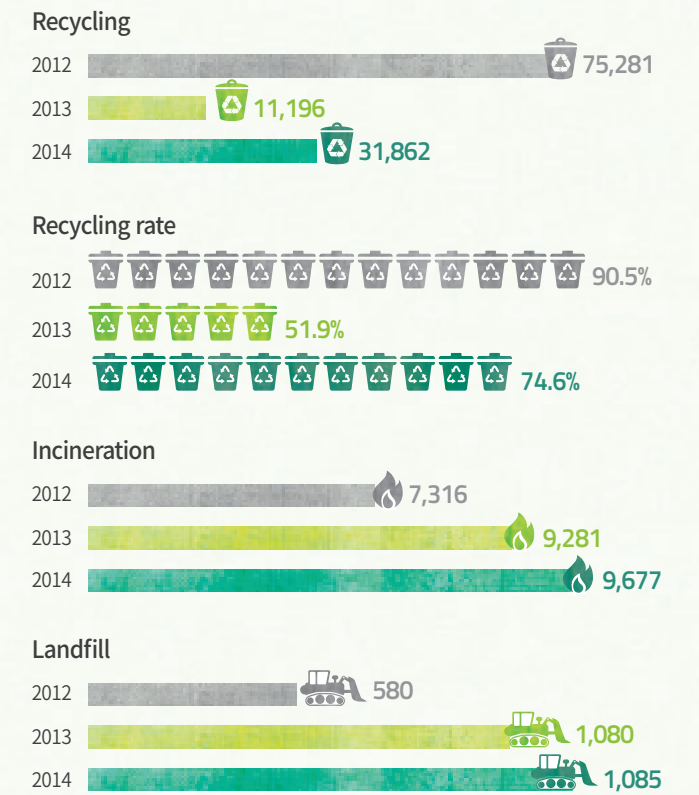
Amount of aircraft de-icing agents

(Unit : ton)



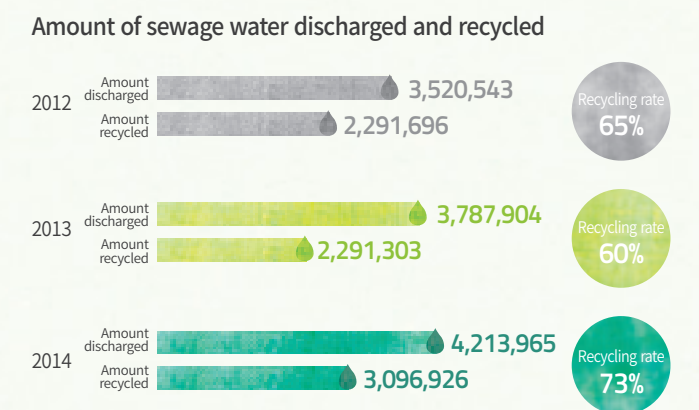
Status of waste treatment

(Unit : ton)



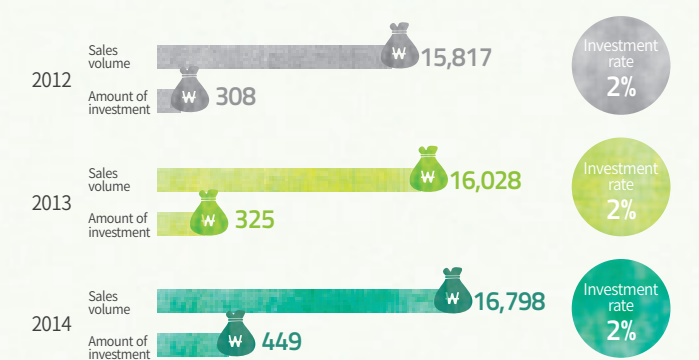
Status of recycling water resources

(Unit : m³)



Amount of environmental investment

(Unit : KRW 100 million)



The Insights of Stakeholders

The Insights of Stakeholders

IIAC proactively reflects insights of stakeholders in devising strategies and doing business operations for low-carbon, eco-friendly management. IIAC conducted written and face-to-face interviews to bring out in-depth insights from stakeholders, and a wide variety of ideas came about.



Kim Yeong-woong
Vice President of the Facilities Division

"IIAC will seek for more pragmatic solutions by putting itself in the shoes of community residents to address setbacks in communities resulting from the airport operation."



Lee Jin-cheol
Team Director at Korea Energy Management Corporation

"Once the influential factors on energy consumption are more specified and managed accordingly, opportunities for energy saving could be found in many aspects."



Ahn Sang-ro
Director of Seoul Regional Aviation Administration

"AC-GPS (Aircraft Ground Power Supply) has been successfully developed by IIAC with domestic technologies and is now commercially operated. It is a good example of new technological development to reduce GHG."



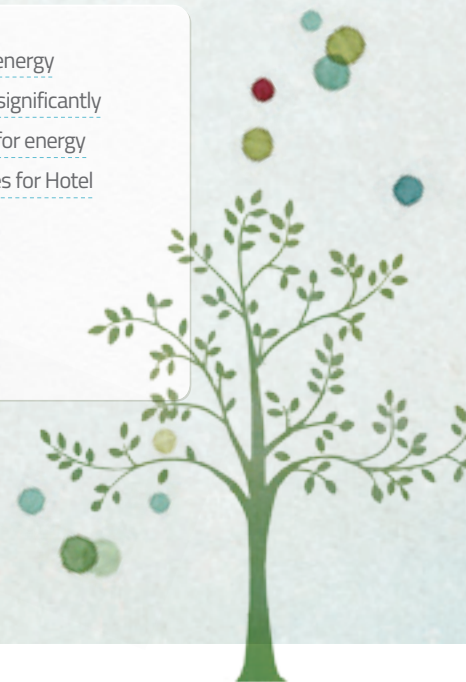
Min Mun-seok
Supervisor at Hotel Shilla

"Sharing IIAC's energy saving cases is significantly helpful to seek for energy saving measures for Hotel Shilla."



Yun Seok-geun
General Manager at POSCO ICT

"If the amount of energy used is monitored and critical facilities are controlled automatically using the energy IT system, it would be conducive to the low-carbon, eco-friendly airport operation where energy consumption is optimized."



TALKING INSIGHT 01

Becoming a Low-carbon, Eco-friendly Global Airport with Community



IIAC will seek for more pragmatic solutions by putting itself in the shoes of community residents to address setbacks in communities resulting from the airport operation.

''

Kim Yeong-woong
Vice President of the Facilities Division

What kind of efforts does IIAC make to ensure a low-carbon, eco-friendly airport?

IIAC researches on the impact of climatic changes including heavy rain, heavy snow and abnormally high temperatures on airport facilities, and responds to climate change with countermeasures in six areas: civil engineering, architecture, plant, energy, air navigation and others. IIAC also strives to establish low-carbon, eco-friendly infrastructure including new and renewable energies, Energy Storage System (ESS) and Building Energy Management System (BEMS). IIAC is implementing aircraft noise countermeasures for areas within the Incheon Airport noise impact zone.

I am curious to know about IIAC's long-term strategies to make a low-carbon, eco-friendly airport.

Under the vision of becoming 'a global leading low-carbon, eco-friendly airport,' IIAC has devised low-carbon eco-friendly strategies, striving to realize such an eco-friendly airport. Accordingly, it has four strategies: sophisticating eco-friendly management, improving the energy efficiency, expanding the low-carbon operation and reinforcing the environmental resources management. Under these strategies, specific tasks are in operation: achieving energy self-sufficiency by 3%, securing eco-friendly transportation systems and conducting the carbon offset program. IIAC also acquired preliminary certification of Green 1st Grade for the second passenger terminal which will be completed by 2017. IIAC devised a plan to save energy by 40% compared with the existing terminal by installing solar and geothermal systems. In order to facilitate aircraft's GHG emission reduction, IIAC is expected to focus more on the installation of domestically developed AC-GPS (Aircraft Ground Power Supply), and PC-Air (Pre-Conditioned-Air).

Aircraft noise is an issue to be continuously addressed as it is a part of the nature of an airport. In 2014, what did IIAC do to reduce aircraft noise?

Utmost attention is paid to minimize complaints in communities arising from aircraft noise. Staff at IIAC visited areas of noise impacts to experience aircraft noise as IIAC strived to find pragmatic solutions in residents' perspectives. In 2014, air routes with severe aircraft noise during night time were found out, and discussions were underway to minimize the noise through collaboration among IIAC, airlines and Seoul Regional Aviation Administration. At night, as a consequence, planes are detoured to avoid flying over residential areas by operating more night-time flight routes. This gave local residents less discomfort from the noise.

TALKING INSIGHT 02

Developing New Technologies to Reduce GHG and Save Energy in the Airport Industry

AC-GPS (Aircraft Ground Power Supply) has been successfully developed by IIAC with domestic technologies and is now commercially operated. It is a good example of new technological development to reduce GHG.



Ahn Sang-ro

Director of Seoul Regional Aviation Administration

How are Seoul Regional Aviation Administration and IIAC cooperating with each other to operate a low-carbon, eco-friendly airport?

Seoul Regional Aviation Administration inspects on the status of Incheon Airport's GHG emission reduction and energy saving actions. It is also collaborating with IIAC to establish new and renewable energy facilities and replace the existing equipment with high-efficiency ones so that various types of efficiency enhancement projects could be seamlessly carried out. The GHG emission trading scheme has been up and running from 2015, bringing in a cooperative system to come up with solutions including devising strategies and exploring technologies to reduce GHG over the medium and long term.

Which areas would you give high scores among IIAC's low-carbon, eco-friendly management activities?

Despite the increases in the passenger and flight volume last year, Incheon Airport exceeded the energy and GHG reduction targets. Its prestige as a low-carbon, eco-friendly airport has been boosted thanks to the ACI certification, the energy management system (ISO 50001) certification and adoption of the building energy management system (BEMS). In particular, the BEMS has been adopted this year to monitor the consumption status of all energies used at the airport and induce optimal energy consumption, which, I think, deserves highest acclaims. It is also noteworthy that eco-friendly design has been introduced to the 3rd phase construction of Incheon Airport as IIAC strives to reduce GHG and save energy.

What would be ideal directions for IIAC to operate a low-carbon, eco-friendly airport?

Due to higher energy consumption amid increases in the number of passengers every year, Incheon Airport's energy consumption inevitably swells. Therefore, more attention must be on securing low-carbon, eco-friendly infrastructure including scaling up PV and geothermal facilities and replacing the existing HVAC with high-efficiency one. Moreover, IIAC must make steadfast efforts to develop new technologies to reduce GHG. The AC-GPS and PC-AIR that have started to be commercially operated, following IIAC's successful application of domestic technologies are the signature examples of new technological development. Hopefully, more efforts could be poured in to develop new GHG reduction technologies and expand their dissipation.

TALKING INSIGHT 03

Exploring Diverse Energy Saving Opportunities Including Replacing with LED Lighting and Installing PVs, etc.

Once the influential factors on energy consumption are more specified and managed accordingly, opportunities for energy saving could be found in many aspects.



Lee Jin-cheol

Team Director at Korea Energy Management Corporation

IIAC is systematically engaged in energy management activities by adopting the energy management system (ISO 50001). What were some of the impressive points about IIAC's energy management activities?

IIAC's level of energy management is believed to be comparatively higher than others'. All of its departments are taking part in energy management, while each of them sets energy reduction targets and achieve them through continued inspection. In particular, it was impressive that the working-level staff were proactive in discovering issues to be improved with tenants in the airport to achieve the targets, and have exceeded them.

IIAC acquired the energy management system (ISO 50001) for the first time in the Korean airport industry. What kind of efforts would be required to sophisticate the energy management system?

Because the factors impacting energy consumption are changing all the time without any fixed patterns in place, it is critical to sophisticate a performance evaluation model to rationally measure and measure such factors. IIAC is operating the energy management system in such a top-tier level, but if the corporation can manage them by specifying the influences, it will be able to acquire energy saving opportunities in many aspects.

In the course of IIAC's generating performance more strategically in proceeding with energy management activities, what would be an ideal approach to take?

IIAC conducts energy management activities in many ways. If IIAC takes a more strategic approach to bear more fruits, it could hopefully generate immediate energy saving performance by further replacing the existing lighting with LED Lighting. Moreover, the expansion of PVs and geothermal energy with a lot of idle space around the airport would be significantly conducive to energy saving in the HVAC. In the medium- and long-term perspective, it would be essential to focus on 'how to operate and manage participating units to manage energy efficiently,' which is a core concept in energy management. Once IIAC strives to transform the facility-oriented improvement activities into human behavioral change-oriented ones, and acts out plans one by one by prioritizing each activity, continued favorable outcome would come about.

TALKING INSIGHT 04

Realizing the Optimal Energy-saving Airport by Introducing the Energy IT System

“ If the amount of energy used is monitored and critical facilities are controlled automatically using the energy IT system, it would be conducive to the low-carbon, eco-friendly airport operation where energy consumption is optimized. ”



Yun Seok-geun

General Manager at POSCO ICT

POSCO ICT is involved in baggage handling at Incheon Airport. I wonder how energy saving can be performed with it.

Using BHS (Baggage Handling System), POSCO ICT's exclusive solution, tags attached on the baggage are interpreted so that classification, delivery and search are implemented through a single system under the automatic logistic system. Peak hours with many passengers and off-peak hours are distinguished, in particular, and baggage is automatically controlled to be handled in the shortest timeframe and passages, minimizing the facility operating hours. This significantly contributes to reducing the amount of electricity consumed for operating baggage facilities.

How else is POSCO ICT contributing to energy saving?

POSCO ICT was steadily positioned as the first ranker at IIAC's energy saving inspection. Daily practical information was shared in online cafés and blogs including saving energy in one's daily life in an organization and purchasing of green products, which generated better-than-expected results. Information is also shared on how to improve baggage facilities among partner companies via a collaboration portal of IIAC. Small weekly meetings are held with the working-level departments and heads of sites on baggage handling to share performance on energy saving. Pragmatically feasible suggestions out of the agenda are immediately reflected in practice in the course of making steady efforts for energy saving.

In the perspective of an IT company, what kind of IT system would have to be adopted primarily by IIAC to operate a low-carbon, eco-friendly airport?

I think IIAC adopted the Building Energy Management System (BEMS) and the Energy Storage System (ESS) in a timely manner. The BEMS is a solution enabling the diagnosis of the energy wasting factors in facilities, review of improvement measures and follow-up management to optimize energy consumption of buildings. The ESS, meanwhile, is an energy efficiency-enhancing system that stabilizes the electric power system by storing the electric power in secondary batteries where there is little power demand and using the stored power amid a higher demand. If these energy IT systems are utilized to monitor the amount of energy used and major facilities are automatically controlled, it would be helpful to operate a low-carbon, eco-friendly airport where energy consumption is optimized.

TALKING INSIGHT 05

Supporting Tenants with Energy Saving Activities Including Sharing Energy Saving Methodologies

“ Sharing IIAC's energy saving cases is significantly helpful to seek for energy saving measures for Hotel Shilla. ”



Min Mun-seok

Supervisor at Hotel Shilla

What are your thoughts on IIAC's energy management activities for tenants in the airport?

Preparing against a crisis in the supply and demand of electricity that is repeated every summer, IIAC has devised a scenario-specific manual as it strives for energy management in conjunction with tenants. Energy management review and status inspection on tenants take place steadily. Energy usage records are compiled by year/quarter, and shared with energy managers of tenants to seek for new energy saving measures.

What kind of energy management activities is Hotel Shilla engaged in?

Energy management seminars organized by IIAC alerted us at Hotel Shilla on our energy usage amount, and now we focus on energy saving at the duty-free shop store. Benchmarking the LED Lighting installations for public corridors and customer facilities at Incheon Airport, we have replaced 50% of the appliances and ceiling lights into LED Lighting since 2013, and taken out lighting of brightness above the average through the brightness measurement in the store. As a result, we could save energy expenses of about KRW 3 million in 2014, following about KRW 10 million in 2013. Automatic timers are also attached to 37 cold & hot water dispensers out of 38 in total, while reducing unnecessary electricity consumed at night. In 2014, we plan to have 100% LED Lighting in place throughout the store, and strengthen awareness among our employees on energy saving through the Green Growth Green Energy Diet Training in the first and second half of the year for employees of the duty free shop of Hotel Shilla.

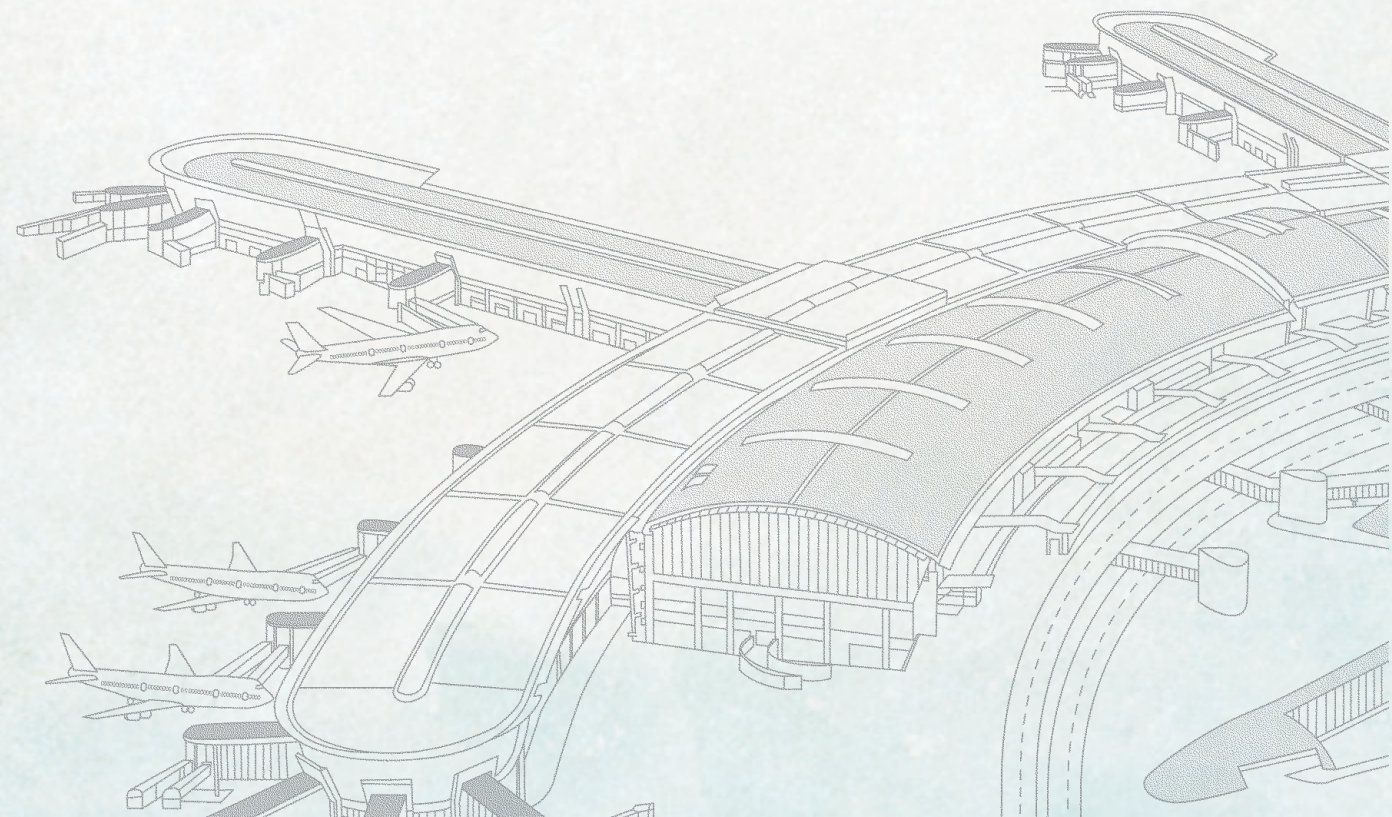
What would be the top priorities to be implemented by IIAC with tenants to operate a low-carbon, eco-friendly airport?

I hope there could be a special training program or a green energy experiential zone organized by IIAC to raise awareness on energy saving. For airport patrons, event zones could be made available steadily for various activities: a power generating device manually operated to raise awareness about the preciousness of energy and the nature, and introduction of a code of actions for energy saving and how to generate electricity using PV, wind, tidal and geothermal energies.



Appendix

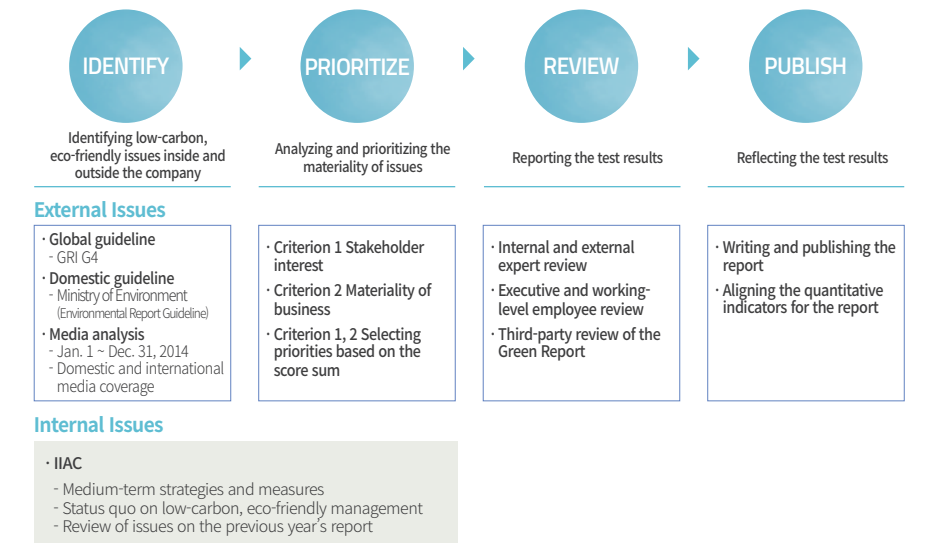
Materiality Test
Verification Report
Third Party Assurance Statement
GRI INDEX



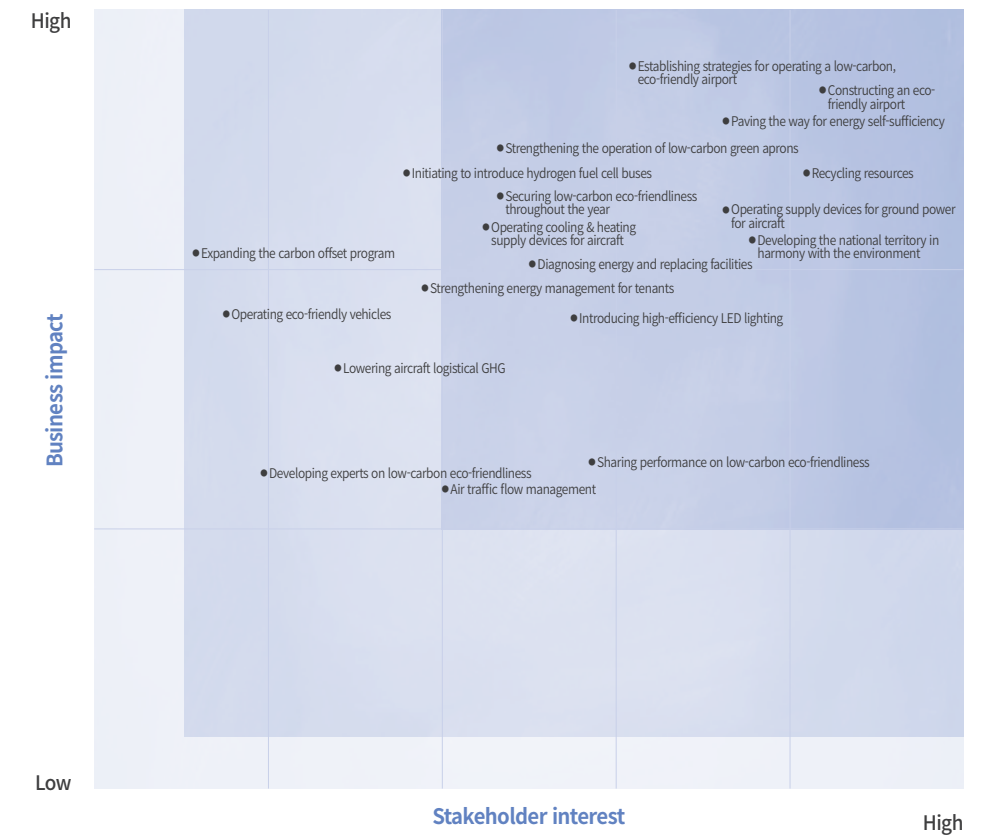
Materiality Test

IIAC manages low-carbon, eco-friendliness-related issues grabbing stakeholders' interest and critically impacting management activities through its internal materiality test process. Issues related to low-carbon eco-friendliness critically considered by diverse stakeholders are selected to come up with core content for reporting.

Materiality Test Process



Issues of Materiality on IIAC's Low-carbon, Eco-friendly Management



Verification Report

Greenhouse Gas, Energy Target Management System Verification Report

Verification Subject

Incheon International Corporation

Korea Foundation for Quality has verified "2014 Greenhouse gas emission and energy consumption statement (hereafter 'statement') of IIAC".

Verification Scope

All GHG emitting facilities under IIAC's control.

Verification Standard

The verification was carried out in accordance with 'Guideline for the Operation of Greenhouse Gas & Energy Target Management Operations'.

Verification Procedure

The verification was planned and carried in accordance with each clause of 'Guideline for the Operation of Greenhouse Gas & Energy Target Management Operations'. The level of verification was ensured to be satisfactory. Also, we conducted internal assessment to ensure that each step of verification was carried out effectively.

Limit of Verification

We suggest following comments for the Greenhouse Gas & Energy consumption data specified in the statement.

Verification Comment

- 1) 2014 Greenhouse gas emission statement of IIAC is written on the basis of 'Guideline for the Operation of Greenhouse Gas & Energy Target Management Operations'.
- 2) The materiality as a quantitative threshold as a result of the materiality test on IIAC's GHG emissions and energy usage amount in 2014, given the above conditions, falls below 5.0% of the total emissions.
- 3) Therefore, we provide appropriate comments on 2014 Greenhouse gas emission and energy consumption.

Representative of Korea Foundation for Quality
Byung-Taek, Yoo



Third-Party Verification Statement

I congratulate IIAC on the publication of '2015 Green Report' as it strives to leap higher as a low-carbon, eco-friendly airport. Seeking to achieve the vision of 'global leading low-carbon, eco-friendly airport by 2020,' IIAC devised strategies and goals in four areas: sophisticating eco-friendly management, improving the energy efficiency, expanding the low-carbon operation and reinforcing the environmental resources management. This hints at IIAC's balanced pursuit of low-carbon, eco-friendly management. I would like to provide the following feedback and propositions for IIAC to more effectively carry out low-carbon, eco-friendly management activities by reviewing this report:

First, performance reporting in line with its directions for low-carbon, eco-friendly management is very systematic.

Specific and succinct reporting is done on activities to make improvement to achieve goals in the four areas of low-carbon, eco-friendly management. The report had specific information on the management of carbon footprint generated in the course of operating the airport, IIAC's efforts for energy self-sufficiency, overall performance and year-on-year improvements made on resources consumption and cyclic flow as well as awards and prizes.

Second, the background for selecting and analyzing issues of materiality on low-carbon eco-friendliness must be more specifically explained.

That IIAC analyzes relevant core issues and reflecting stakeholders' insights on an annual basis is considered to be hinting at the objectivity and transparency of the report. Stakeholder interviews, in particular, were helpful to understand IIAC's low-carbon, eco-friendly management activities and performance in an objective perspective. However, if the issue selection background and analyses are more specified to show how materiality of low-carbon, eco-friendly issues evolves in terms of the materiality test, stakeholders would be able to understand IIAC's low-carbon, eco-friendly management in a deeper level.

Third, consistency and conformity with national policies on low carbon, eco-friendliness and the creative economy must be scaled up further.

As a representative public corporation in the aviation industry, IIAC makes utmost efforts to realize the national strategy on low-carbon eco-friendliness by establishing a low-carbon economic and social structure, realizing the creative economy based on the convergence of green technologies and ICT and establishing a secure and pleasant basis of living against climate change. It was reaffirmed through the report that IIAC as a company subject to the GHG emission trading scheme takes the lead in realizing the creative economy: establishing a sustainable energy system by adopting eco-friendly power generation facilities including PVs and geothermal energy to achieve the reduction targets, and developing aircraft ground power and cooling & heating supply devices. The second passenger terminal to be completed by 2017, in particular, is likely to serve as an iconic benchmark in constructing a low-carbon, eco-friendly airport. It is hoped that IIAC could dissipate its know-how on operating the operation of a low-carbon, eco-friendly airport to developing countries, thus strengthening cooperation globally on low-carbon eco-friendliness and contributing to the international community as an exemplary public corporation.

Jeon Ui-chan

Professor at the Department of Environment and Energy, Sejong University
Honorary Chairman at the Korean Society of Climate Change Research
Private Member (Climate Change Division) of the Preside



GRI INDEX

● Fully reported ● Partially reported □ Not reported N/A Not applicable

GRI		Reported	Page
Environmental Performance Indicators			
Materials			
G4-EN1	Materials used by weight or volume	N/A	-
G4-EN2	Percentage of materials used that are recycled input materials	●	33
Energy			
G4-EN3	Energy consumption within the organization	●	30-31, 38
G4-EN4	Energy consumption outside of the organization	●	16, 29, 30-31
G4-EN5	Energy intensity	●	38
G4-EN6	Reduction of energy consumption	●	20
G4-EN7	Reductions in energy requirements of products and services	●	17, 20, 29
Water			
G4-EN8	Total water withdrawal by source	●	39
G4-EN9	Water sources significantly affected by withdrawal of water	●	Unrelated
G4-EN10	Percentage and total volume of water recycled and reused	●	39
Biodiversity			
G4-EN11	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	●	34
G4-EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	●	34
G4-EN13	Habitats protected or restored	●	34
G4-EN14	Total number of IUCN red list species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	N/A	-
Emissions			
G4-EN15	Direct greenhouse gas (GHG) emissions (scope 1)	●	30-31, 38
G4-EN16	Energy indirect greenhouse gas (GHG) emissions (scope 2)	●	30-31, 38
G4-EN17	Other indirect greenhouse gas (GHG) emissions (scope 3)	●	30-31, 38
G4-EN18	Greenhouse gas (GHG) emissions intensity	●	38
G4-EN19	Reduction of greenhouse gas (GHG) emissions	●	20
G4-EN20	Emissions of ozone-depleting substances (ODS)	●	36
G4-EN21	NOx, SOx, and other significant air emissions	●	36
Effluents and Waste			
G4-EN22	Total water discharge by quality and destination	●	39
G4-EN23	Total weight of waste by type and disposal method	●	39
G4-EN24	Total number and volume of significant spills	N/A	-
G4-EN25	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally	N/A	-
G4-EN26	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the organization's discharges of water and runoff	●	34
Products and Services			
G4-EN27	Extent of impact mitigation of environmental impacts of products and services	●	22-23, 28, 32
G4-EN28	Percentage of products sold and their packaging materials that are reclaimed by category	N/A	-
Compliance			
G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	N/A	No cases of discrimination
Transport			
G4-EN30	Significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce	●	22-23, 28-29, 34
Overall			
G4-EN31	Total environmental protection expenditures and investments by type	●	39
Supplier Environmental Assessment			
G4-EN32	Percentage of new suppliers that were screened using environmental criteria	●	16, 21, 37
G4-EN33	Significant actual and potential negative environmental impacts in the supply chain	●	16, 21, 37
Environmental Grievance Mechanisms			
G4-EN34	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms	●	35
Airport Operators Sector Disclosures			
G4-AO4	Quality of storm water by applicable regulatory standards	●	33
G4-AO5	Ambient air quality levels according to pollutant concentrations in microgram per cubic meter (µg/m3) or parts per million (ppm) by regulatory regime	●	36
G4-AO6	Aircraft and pavement de-icing/anti-icing fluid used and treated by m3 and/or metric tons	●	37, 39
G4-AO7	Number and percentage change of people residing in areas affected by noise	●	35

Eco-design Process

This report has been produced with a careful consideration for environment - in order to minimize waste of resources and environmental pollution, we have independently devised phase 3 Eco-design process.



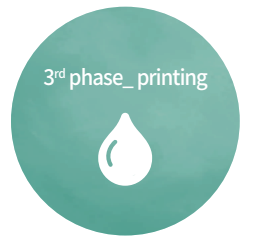
1st phase_planning

Using the minimum dimensions to save paper remnants, reducing the number of pages



2nd phase_designing

Avoiding spot colors and background colors, using eco-fonts saving ink up to 35%



3rd phase_printing

Using eco-friendly paper and soybean oil ink, and avoiding the coating process



Reporting on improper practices
www.airport.kr(Integrity Ombudsman)
Phone consultation 032-741-2145

Korea, a country of integrity



Incheon Airport is committed to providing accurate and reliable information about ecofriendly activities to stakeholders. Please do not hesitate to contact at the details provided below should you wish you inquire further:

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This report was printed on environmental friendly paper using soybean-based ink.