

GREEN PUBLIC PROCUREMENT GUIDELINES

of Ras Al Khaimah

Version 1.0 – November 16, 2020

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16.07.2020	1.0	Draft	Reem, Ras Al Khaimah Municipality
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Table of Contents

DIVISION ONE Abbreviations & Glossary of Terms	1
101 Abbreviations	1
102 Glossary of Terms.....	3
DIVISION TWO Objectives	4
201 Concept and Context of GPP.....	4
202 Purpose	4
DIVISION THREE Legal and Policy Context	6
301 International Agreements.....	6
302 Federal and Emirate Level Strategies	8
DIVISION FOUR Implementation Framework	12
401 GPP in the Procurement Process	12
402 Governance of the GPP.....	14
403 Roadmap.....	17
DIVISION FIVE Scope of the GPP Guidelines.....	18
501 GPP Initiatives	18
502 GPP Criteria.....	18
ANNEX A GPP Criteria for Products	20
ANNEX B GPP Criteria for Services and Contracting Works.....	34
ANNEX C GPP Initiatives	38
ANNEX D Program of Works.....	39
ANNEX E Target Definition and Reporting Templates	40

Tables and Figures

Table 1 Objectives and Main Programs of the UAE Green Agenda 2030	8
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Figure 1 Overview of the Scope of the GPP Guidelines vs. the Scope of the GHG Protocol.	5
--	---

Figure 2 Overview of the Sustainable Development Goals (SDGs).....	7
--	---

Figure 3 Ras Al Khaimah Vision 2030	9
---	---

Figure 4 Ras Al Khaimah Energy Efficiency and Renewables Strategy 2040	10
--	----

Figure 5 Procurement Process	12
------------------------------------	----

Figure 6 Governance of GPP	16
----------------------------------	----

Figure 7 Roadmap for the GPP Implementation	17
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DIVISION ONE

Abbreviations & Glossary of
Terms

101 Abbreviations

AC	Air Conditioner
CO ₂	Carbon Dioxide
DoF	Department of Finance of the Government of Ras Al Khaimah
EE&R	Energy Efficiency and Renewables
EE&R Committee	Energy Efficiency and Renewables Committee
EE&R Strategy	Energy Efficiency and Renewables Strategy 2040
e.g.	exempli gratia “for example”
EGA	Electronic Government Authority of the Government of Ras Al Khaimah
EPDA	Environmental Protection and Development Authority of the Government of Ras Al Khaimah
GHG	Greenhouse Gas
GPC	Green Procurement Champion
GPP	Green Public Procurement
GSO	Gulf Standardisation Organisation
i.e.	id est “in other words”
LCC	Life-Cycle Cost
MOCCA	Ministry of Climate Change and Environment of the UAE
PSD	Public Service Department of the Government of Ras Al Khaimah

RAKEZ	Ras Al Khaimah Economic Zone
RAK Ports	Ras Al Khaimah Ports
Reem	Energy Efficiency and Renewable Energy Sector of Ras Al Khaimah Municipality
SDGs	Sustainable Development Goals
UAE	United Arab Emirates
UN	United Nations

102 Glossary of Terms

Government Entity	Any local government authority, agency, department or organisation within the Emirate of Ras Al Khaimah.
Green Public Procurement (GPP)	A process whereby government entities seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to products, services and works with the same primary function that would otherwise be procured.
Green Procurement Champion (GPC)	A designated employee who ensures that procurement processes within his or her organization follow the GPP Guidelines.
Green Procurement Category Leader	The designated Government Entities which are responsible to develop and periodically update the GPP criteria for their assigned product, service or works categories.
GPP Administrator	The designated Government Entity which coordinates GPP implementation across all participating Government Entities.
Life-Cycle Cost (LCC)	The sum of all recurring and one-time costs over the full lifespan of a product or service or contracting work. This includes but is not limited to the purchase price, installation cost, operating costs, maintenance costs and disposal costs.
Technical Specifications	A description of the technical requirements for a material or product.
Terms of Reference	A description of the scope of work for services generally indicating the work to be performed, the level of quality and effort, the timeline and the deliverables.
Statement of Works	Requirement specifications for work assignments outlining the specific services a contractor is expected to perform, generally indicating the type, level and quality of service, as well as the time schedule required. Usually accompanied by a bill of quantities and/or drawings/designs.

DIVISION TWO

Objectives

201 Concept and Context of GPP

Green Public Procurement (GPP) is a process whereby government entities seek to procure products, services and/or contracting works with a reduced environmental impact throughout their life cycle when compared to other products, services and works with the same primary function.

GPP is in line with Ras Al Khaimah's Energy Efficiency and Renewables Strategy 2040 (EE&R Strategy) which supports the competitiveness of Ras Al Khaimah's economy over the long run, by reducing energy and water consumption and increasing the share of renewables. The EE&R Strategy also aims to create a new market for products and services related to energy efficiency and renewables, which would contribute to the economic growth of the Emirate as well as the development of local skills and capabilities.

This document, the GPP Guidelines, sets the framework for voluntary implementation of GPP in the government of Ras Al Khaimah. The GPP Guidelines are issued in two languages, Arabic and English. The Arabic version shall prevail in any case of conflict.

202 Purpose

The objective of the GPP Guidelines is to support the implementation of green procurement practices to achieve the following goals:



Reduction of energy consumption



Reduction of water consumption



Reduction of GHG emissions and protection of the environment



Development of local supply

Since GPP achieves these objectives by considering the life cycle cost (LCC) of the purchased products, services or works, its implementation is expected to provide economic benefits in the long run. This LCC approach means looking beyond the mere purchase price, to also include other significant cost items over the entire lifespan of a product or service, such as utility costs, maintenance costs, and disposal costs. When LCC is considered, it is more likely that resource inefficiencies are minimized or eliminated. Often this also leads to better environmental performance, due to reduced energy or water consumption, reduced waste of materials, longer useful life, etc.

The primary focus of the GPP Guidelines is on reducing the direct energy and water consumption of the products, services and works purchased by Government Entities. This subsequently reduces the greenhouse gas (GHG) emissions generated from the production of electricity and water that Government Entities buy and consume. The primary focus of the GPP Guidelines also includes stimulus of the local market within the Emirate of Ras Al Khaimah to produce and offer green products and services.

Where considered important, the GPP Guidelines may address indirect GHG emissions and any other key environmental impacts occurring in product, service or contracting works value chains, both up-stream and down-stream. Such broader benefits are considered to be a secondary focus of the GPP Guidelines.

Figure 1 maps the scope of the GPP Guidelines with the definitions of the GHG Protocol.

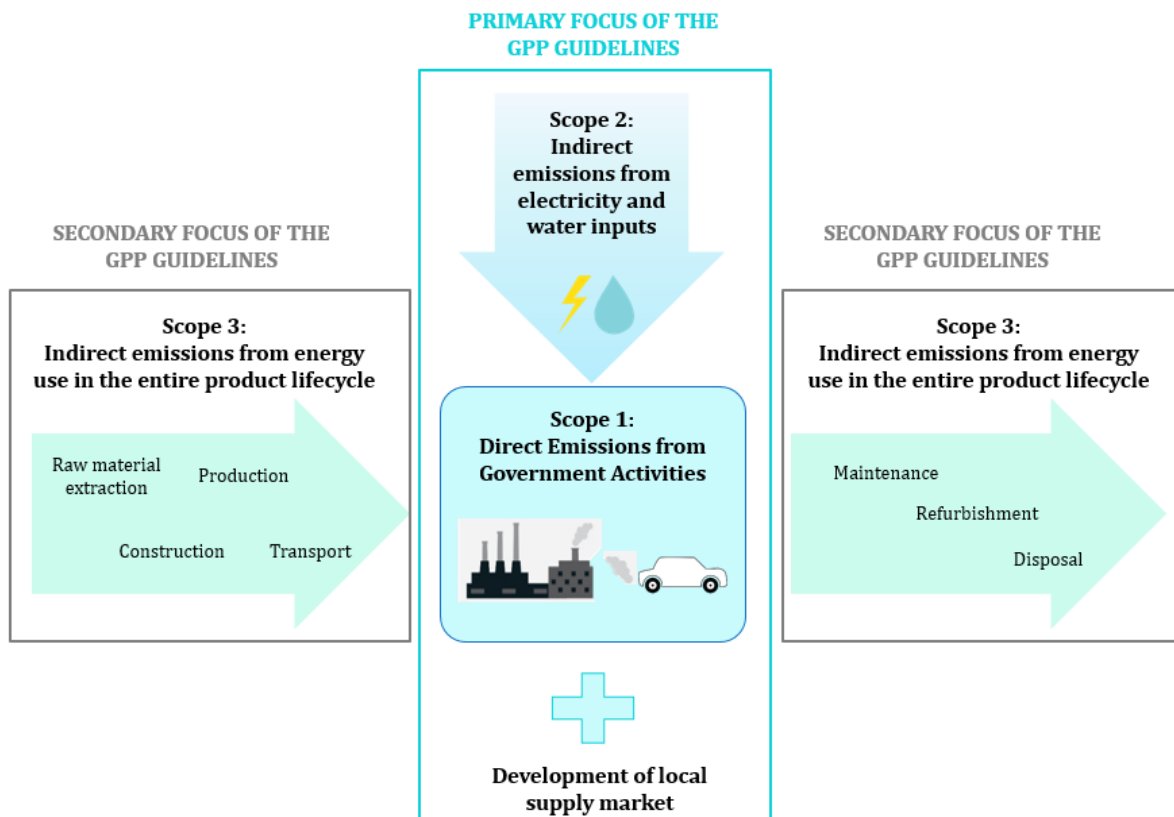


Figure 1 Overview of the Scope of the GPP Guidelines vs. the Scope of the GHG Protocol.

DIVISION THREE

Legal and Policy Context

301 International Agreements

Sustainable Development Goals (SDGs)

In 2015, all United Nations (UN) member states adopted the 2030 Agenda for Sustainable Development, an aspirational plan which aims to provide peace and prosperity for people and the planet. The goals of the 2030 Agenda for Sustainable Development balance the three (3) dimensions of sustainability, i.e. the economic, the social and the environmental dimension, and are formulated around the so called 'five Ps':

- People: Eradicate poverty and hunger in all forms and combat inequalities
- Planet: Protect the planet from degradation so it can support the needs of current and future generations
- Prosperity: Ensure prosperous and fulfilling lives in harmony with nature
- Peace: Foster peaceful, just and inclusive societies
- Partnership: Implement the agenda through global partnerships

The 'five Ps' are addressed by 17 Sustainable Development Goals (SDGs) with 169 sub-targets. As a member of the UN, the UAE is committed to the SDGs and formed a National Committee on SDGs in 2017, which is responsible for the national implementation of the SDGs, including monitoring and progress reporting.

SUSTAINABLE DEVELOPMENT GOALS



Figure 2 Overview of the Sustainable Development Goals (SDGs)

The SDG 12 ‘Responsible Consumption and Production’ explicitly calls for public procurement practices that are sustainable and in line with national environmental policies (sub-target 12.7). The number of countries implementing sustainable procurement practices is used as an indicator to measure progress toward this sub-target. GPP can also lead to a more efficient use of materials (sub-target 12.2), an environmentally sound management of chemicals (sub-target 12.4) and helps to reduce waste generation (sub-target 12.5).

Besides SDG 12, GPP indirectly contributes to various other SDGs. For example, mandating a high energy and water efficiency for purchased goods and assets supports SDG 6 ‘Clean Water and Sanitation’ and SDG 7 ‘Affordable and Clean Energy’, particularly the sub-targets 6.4 ‘Increase the Water Efficiency’ and 7.3 ‘Increase the Energy Efficiency’. GPP can also promote a sustainable use of ecosystems, which supports SDG 14 ‘Life Below Water’ and 15 ‘Life on Land’, by, for example, requiring timber products to come from sustainable forestry (sub-target 15.2). Moreover, GPP incentivizes the market to adopt clean and environmentally sound production methods (sub-target 9.4), thus contributing to SDG 9 ‘Industry, Innovation and Infrastructure’.

302 Federal and Emirate Level Strategies

UAE Green Agenda 2030

Building upon the UAE Vision 2021, the UAE developed the Green Agenda 2030. This new initiative was approved in 2015 and includes five (5) strategic objectives with twelve (12) main programs with various sub-programs aimed to transform the country towards a green economy. The strategic objectives and main program are illustrated in the table below.

Table 1 Objectives and Main Programs of the UAE Green Agenda 2030

Strategic Objective	Main Programs
1. Competitive Knowledge Economy	1.1 National Green Innovation Program
	1.2 Green Diversification Program
2. Social Development & Quality of Life	2.1 Integrated Green Infrastructure Program
	2.2 Green Workforce & Talent Program
3. Sustainable Environment & Valued Natural Resources	3.1 Natural Capital & Resilience Program
	3.2 Environmental Goods & Services Program
4. Clean Energy & Climate Action	4.1 Integrated Power & Water Management Program
	4.2 National Renewable Energy Program
	4.3 National Green Economy Data Program
5. Green Life & Sustainable Use of Resources	5.1 National Energy & Water Efficiency Program
	5.2 National Waste-to-Resource Program
	5.3 National Sustainable Transport Program

GPP falls under the third objective and is one initiative of program 3.2 Environmental Goods and Services, which aims to enhance the market penetration of environment-friendly goods and services.

National Climate Change Plan 2017 – 2050

The UAE's National Climate Change Plan was launched in 2017 and is part of the country's commitment towards the SDGs, particularly SDG 13 'Climate Action', and also contributes towards the Green Agenda 2030. The climate change plan has the following three objectives:

- Manage GHG emissions in harmony with economic growth
- Minimize climate risks and increase the UAE's climate resilience
- Reduce the UAE's dependence on fossil fuels

The plan highlights the importance of the private sector, which plays a critical role in the country’s economic diversification by providing environmental friendly goods and services. To fulfil this role, the government must enable the private sector through a supportive regulatory framework as well as through incentives. As an immediate action, federal and emirate-level governments are encouraged to develop policies for climate-smart industries and services. In this context, the plan specifically refers to the strengthening of GPP legislations.

Ras Al Khaimah Vision 2030

At an Emirate level, the Ras Al Khaimah Vision 2030 builds upon the triple bottom line People, Planet and Profit and has the three pillars ‘economy’, ‘society’ and ‘environment’. The environmental pillar aims to secure the water and energy availability, to increase the energy competitiveness and to provide distinguished and sustainable public service standards. GPP is one of the programs in Vision 2030 as illustrated in Figure 3.

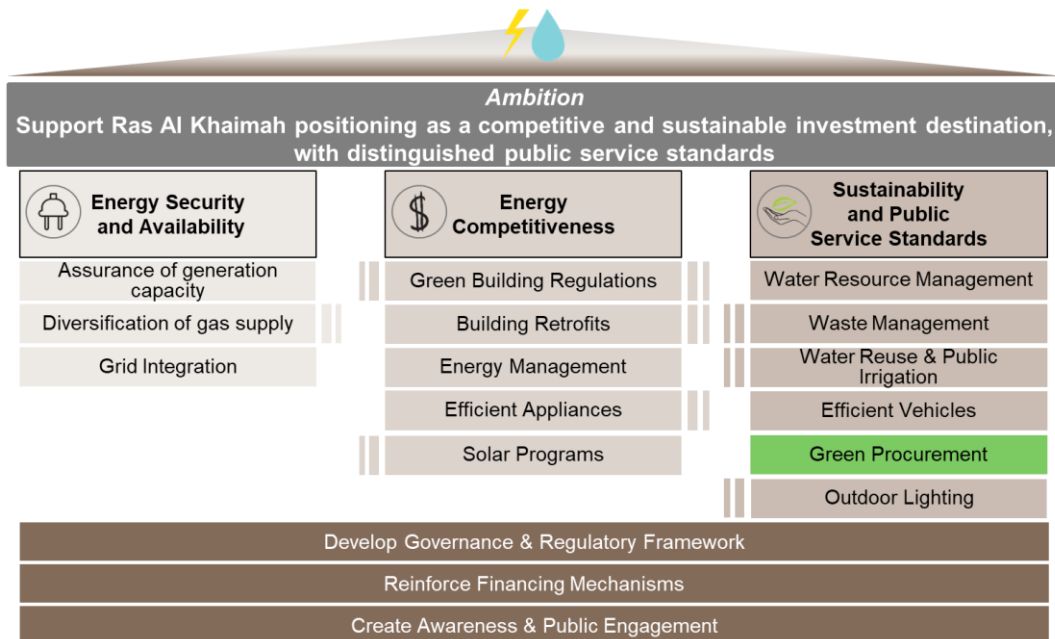


Figure 3 Ras Al Khaimah Vision 2030 for Energy, Renewables and Utilities

EE&R Strategy

GPP also contributes to the EE&R Strategy of Ras Al Khaimah, which aims to save 30% energy and 20% water versus business as usual and to increase the share of renewables to 20% by 2040. The EE&R Strategy consists of nine programs with five enablers as illustrated in Figure 4.

The GPP Guidelines fall under the enabler ‘Policy and Regulation’, as the guidelines influence public spending towards energy and water efficient products, services and contracting works, and thus support various programs, such as Efficient Appliances, Efficient Street Lighting and Efficient Vehicles. The GPP Guidelines also contribute to the enabler ‘Awareness and Capacity Building’ both within the government and in the private sector.

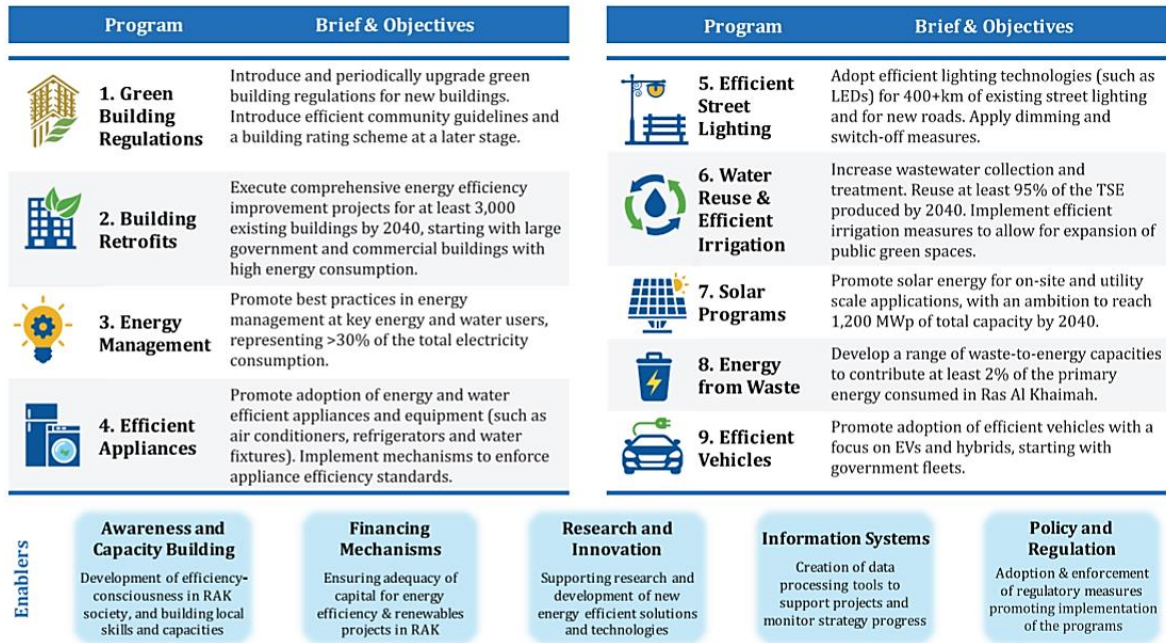


Figure 4 Ras Al Khaimah Energy Efficiency and Renewables Strategy 2040

The EE&R Strategy as well as other federal directives formulate several requirements and recommendations for public procurement, which are summarized below. The GPP Guidelines ensure compliance with these obligations.

Barjeel, the Green Building Regulations of Ras Al Khaimah

The Executive Council of Ras Al Khaimah issued Resolution No. 6 of 2018 to adopt Barjeel, the green building regulations of Ras Al Khaimah. Barjeel sets minimum sustainability standards for new constructions, and buildings permitted under Barjeel are expected to consume 30% less water and energy. The regulations became mandatory on 31 January 2020 and all new buildings, including government buildings, are required to comply with Barjeel.



The GPP Guidelines encourage compliance with Barjeel for the replacement of lights and of water fixtures and fittings in existing buildings.

Energy Management

Amiri Resolution No. 15 of 2018, mandates Government Entities to reduce energy and water consumption in their operations and facilities by 20% by 2022, through retrofitting their buildings and/or through implementing energy management systems such as ISO 50001. ISO 50001 requires establishing and implementing procurement criteria for evaluating the energy performance of products, services and contracting works, which impact the organization’s overall energy performance. ISO 50001 also mandates companies to inform their suppliers of these procurement criteria, and to define and communicate particular specifications where applicable.



The GPP Guidelines support Government Entities in their efforts to lower their energy and water consumption by ensuring that purchased products are energy and water efficient. In addition, the GPP Guidelines are compliant with ISO 50001 procurement requirements.

Efficient Vehicles

Amiri Resolution No. 34 of 2018 mandates at least 30% of light vehicles purchased by local Government Entities to be efficient and at least 10% to be either hybrid or electric vehicles. Any vehicle with a GSO rating of 'Good' or above is considered efficient.



The GPP Guidelines set criteria for the purchase and rental of light vehicles, which meet or exceed the requirements of the Amiri Resolution No. 34 of 2018.

Recycled Materials

Ministerial Decision No. 21 by the Ministry of Climate Change and Environment (MOCCAEE) urges Government Entities to use recycled materials for public road works and infrastructure projects. The percentage of recycled material, however, should not exceed 40%.



The GPP Guidelines encourage the use of recycled materials in construction works and further enhance awareness on this topic.

DIVISION FOUR

Implementation Framework

401 GPP in the Procurement Process

The main steps of the procurement process are highlighted in Figure 5. The subsequent sections detail how GPP can be taken into account in each of those steps.



Figure 5 Procurement Process

Procurement Planning

The first step in the procurement process is to analyse the procurement needs, identify the desired procurement outcomes and objectives and plan the procurement budget. GPP should already be considered in these early stages of procurement, and the procurement of environmental friendly products can be set as a key objective. Government Entities can also entirely 're-think' their procurement need and identify new ways which meet their demand but require less or different purchases. By procuring less or differently, fewer

materials and resources are depleted, with economic and environmental benefits for the Government Entity. Examples of such GPP initiatives are provided in Chapter 501.



To ensure that GPP is being considered in procurement planning, Government Entities should develop annual targets for the implementation of GPP. This target definition process is further detailed in Chapter 402.

Requirement Definition

In the next step of the procurement process, technical specifications, terms of reference for services, or statement of works for contracting works (all of which are hereinafter referred to as 'specifications') are developed which are part of the solicitation documents and form the core of the future contract. These specifications need to include clear and appropriate definitions and descriptions of the procurement need, while avoiding any bias towards specific suppliers. GPP entails integration of environmental aspects into the specifications. The selection of the most important environmental aspects to be considered is a result of LCC consideration. As the effort to conduct LCC analysis is typically only justified for high-value items or projects, the GPP Guidelines simplify such evaluation for buyers by defining GPP Criteria for common categories of spend, which are designed considering LCC.



GPP Criteria are designed for commonly purchased categories of products, services and contracting works, which can be included in tenders as specifications. The GPP Criteria are provided in Annex A and Annex B.

Solicitation Process

At the sourcing stage, suitable suppliers need to be identified. Another task is to select the appropriate procurement strategy, e.g. to choose the type of competition and to select the solicitation and evaluation method. Once the procurement strategy is selected, the solicitation documents are prepared accordingly and issued.



The GPP Guidelines do not impose or recommend any changes to the current solicitation process and Government Entities can continue to follow the standard procurement procedures.

Evaluation

After the solicitation process, the received offers are handled as per the instructions provided in the solicitation documents and as per the Government Entity's rules and procedures pertaining to the opening and evaluation of offers.



For the products, services and contracting works covered by GPP Criteria, GPP does not require any changes to the current evaluation process and Government Entities continue to follow the standard procurement procedures. In case GPP Criteria were included in the specifications, bids should be evaluated for compliance with such criteria and non-compliant bids must be excluded. For other purchases that are not supported by GPP Criteria, application of GPP requires the financial evaluation to include not only purchase price but broader elements of LCC.

Tender Award

Once the tender has been awarded, and the purchase is confirmed to the selected supplier, unsuccessful suppliers are generally notified and debriefed. This is an opportunity to highlight any deficiencies related to the environmental criteria, enabling unsuccessful suppliers to respond better to future solicitations. For the selected supplier, any environmental results should be measured against the outcome that was initially desired. Any lessons learnt should feed back into procurement planning.



GPP does not impose or recommend any changes to the current tender award process and Government Entities continue to follow the standard procurement procedures. In case GPP Criteria were included in the specifications, these should be inserted into the contract or purchase order to serve as proof of obligation of the supplier. Upon delivery, Government Entities should also monitor whether the GPP Criteria are being fulfilled, and should incorporate any lessons learnt in their procurement planning process.

402 Governance of the GPP

As the opportunity to apply GPP is different for each Government Entity based on the type of products and services they buy, their strategic priorities, their business requirements and financial constraints; governance of GPP is designed to promote participation of all Government Entities, while allowing each of them to define breadth and depth of participation.

GPP implementation is overseen by the EE&R Committee. The following roles and responsibilities are defined to support the GPP process:

Ras Al Khaimah Municipality:

Ras Al Khaimah Municipality issues and periodically updates the GPP Guidelines, following endorsement from the EE&R Committee.

GPP Administrator:

The GPP Administrator is the designated Government Entity endorsed by the EE&R Committee to coordinate GPP implementation across all participating entities. Its role includes, *inter alia*, coordination of the targeting and reporting process, appointment of GPP Category Leaders and pursuit of continuous improvement of GPP practices, including proposals for update of the GPP Guidelines.

GPP Category Leaders:

The GPP Category Leaders are responsible for developing and periodically updating the GPP Criteria of their assigned categories, subject to the endorsement of the EE&R Committee.

GPP Initiative Leaders:

The GPP Initiative Leaders are responsible for developing their assigned GPP Initiatives, subject to the endorsement of the EE&R Committee, and coordinating their implementation.

Green Procurement Champions (GPCs):

A GPC is a designated employee within each Government Entity holding the mandate to promote and coordinate adoption of the GPP Guidelines by his or her respective Government Entity. This role includes, *inter alia*, driving the GPP targeting and reporting process, raising GPP awareness, and training purchasing professionals within the Government Entity.

These roles are the key agents in the GPP process as explained below.

Target Definition

Each Government Entity should develop annual targets for the implementation of the GPP Guidelines and communicate those targets to the GPP Administrator before the beginning of each year. This process should be embedded into the Government Entity's overall planning process. Targets may include:

1. GPP Initiatives

- Progress of GPP Initiatives: Government Entities may specify targets related to the adoption of GPP Initiatives within their organization. Examples of such initiatives are provided in Chapter 501.

2. Penetration of Green Purchases

- Overall penetration of GPP: Government Entities may specify a percentage of the overall procurement, either by value or by number of contracts, to comply with the GPP Guidelines, e.g. at least half of all product purchases shall adhere to the criteria set out in the GPP Guidelines.
- Penetration of GPP in specific types of products or services and contracting works: Government Entities may specify targets for specific product or service and contracting work categories, e.g. all purchased paper shall comply with the criteria outlined in the GPP Guidelines.

The GPP Administrator may provide guidance for the definition of targets to ensure that they remain in line with expectations for the government of Ras Al Khaimah overall.

Progress Reporting

Government Entities should report progress of implementation of the GPP Guidelines to the GPP Administrator on a yearly basis. The progress report should compare the level of achievement with targets and outline mitigation measures if necessary. Templates for the target definition and progress reporting are

provided in Annex E. The GPP Administrator reviews the progress reports, and consolidates reporting to the EE&R Committee.

Development and Update of the GPP Criteria

The GPP Administrator in consultation with the EE&R Committee periodically reviews and updates the categories for which GPP Criteria need to be developed. This review should be conducted at least every three years. The GPP Administrator subsequently appoints selected Government Entities as GPP Category Leaders responsible for developing and periodically updating the criteria for their assigned categories.

The GPP Category Leaders should develop or update criteria taking into account their financial impact, product or service availability, and impact on the local market. The proposed criteria should be submitted through the GPP Administrator to the EE&R Committee for endorsement, prior to review and issuance by Ras Al Khaimah Municipality. Upon issuance, the GPP Administrator communicates the criteria to all Government Entities. In addition, the GPP Administrator should review and if necessary update the GPP Guidelines at least every three years, and submit the same for endorsement to the EE&R Committee, prior to review and issuance by Ras Al Khaimah Municipality. The list of GPP Category Leaders is provided in Annex D.

Development of GPP Initiatives

The GPP Administrator in consultation with the EE&R Committee also defines the need for GPP Initiatives and subsequently appoints selected Government Entities as GPP Initiative Leaders, responsible for developing and implementing their assigned GPP Initiative.

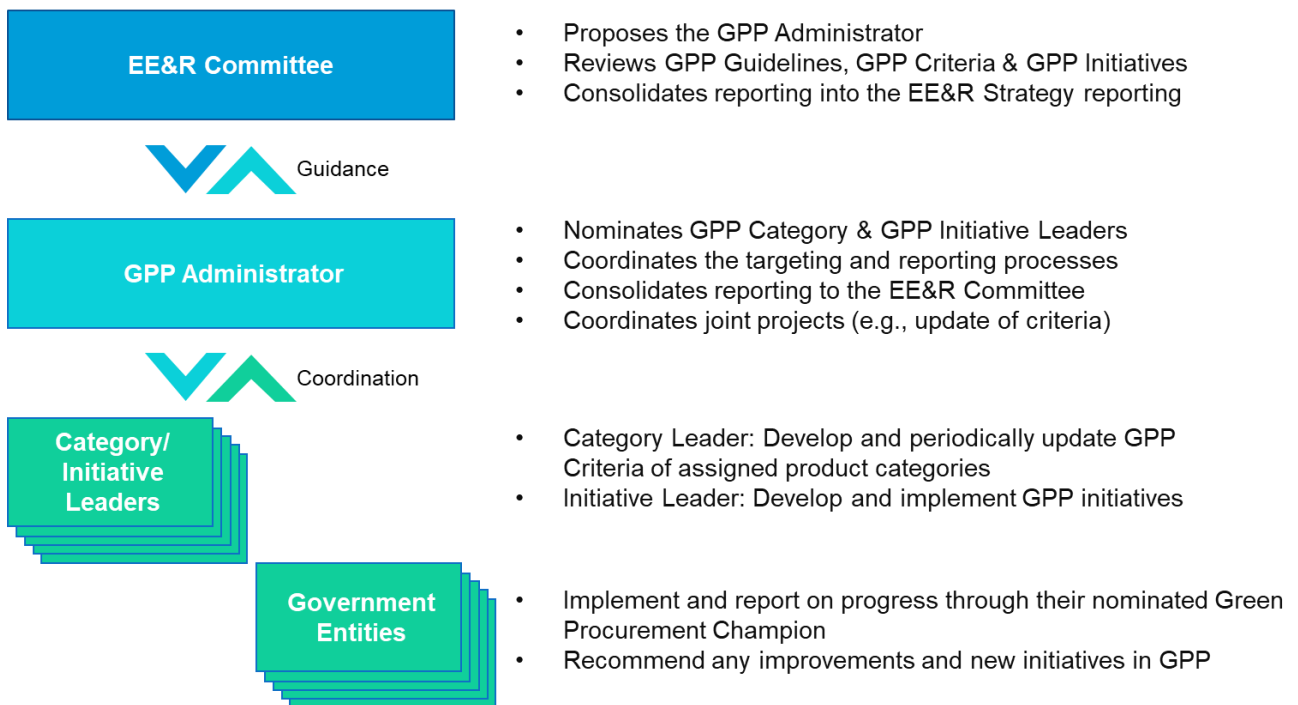


Figure 6 Governance of GPP

403 Roadmap

The roadmap for GPP implementation is illustrated in Figure 7.

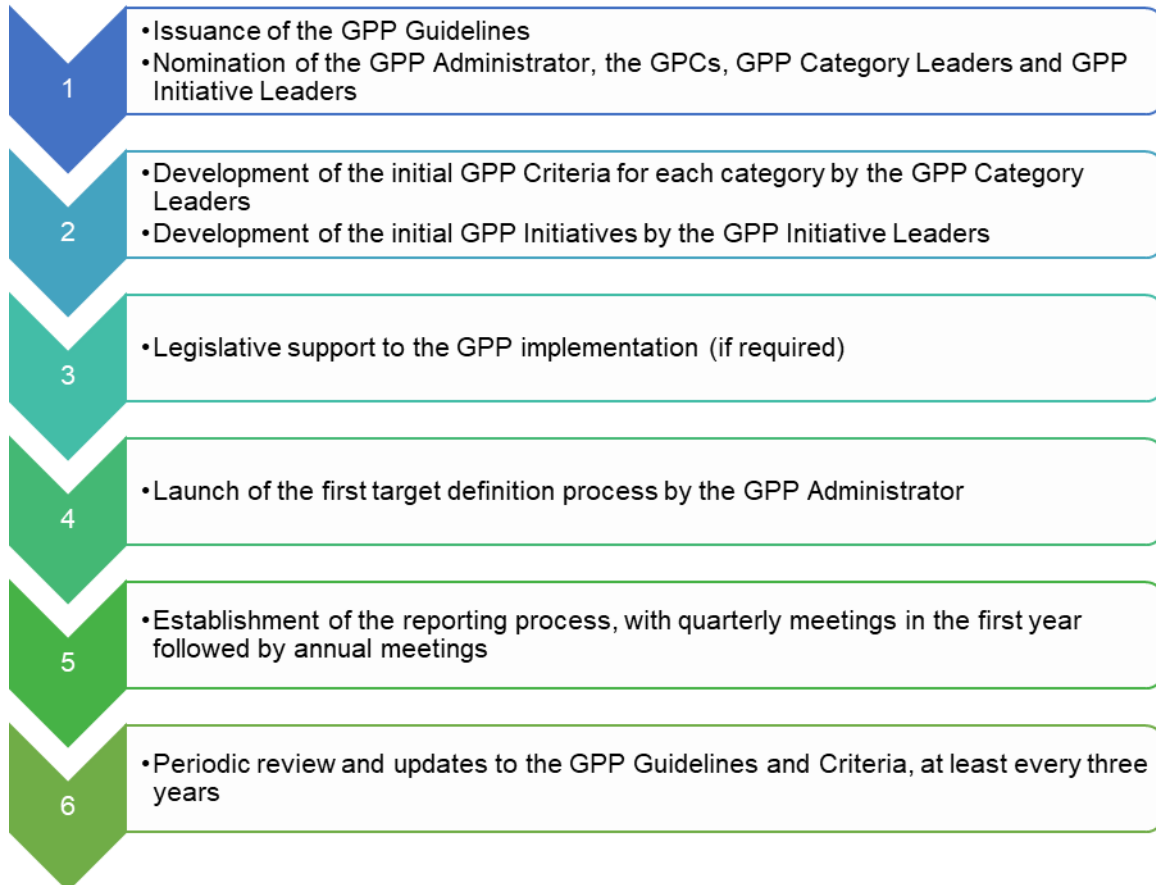


Figure 7 Roadmap for GPP Implementation

DIVISION FIVE

Scope of the GPP Guidelines

The GPP Guidelines are only applicable to newly procured products, services and contracting works and do not affect any products that are already in use or any on-going service or contracting work agreements.

501 GPP Initiatives

GPP initiatives aim to either avoid unnecessary purchases or to improve operational aspects related to GPP processes or capacity building, such as the training of purchase professionals.

Illustrative examples of GPP Initiatives that may be implemented include:

- Implement a paperless system and thus spend less money on purchasing paper.
- Avoid single use plastics, therefore diverting purchases towards items that have lower environmental impact, while also achieving cost benefits.
- Introduce working from home policies and video conferencing to reduce GHG emissions associated with commuting, lower the organization's fuel bills and reduce the amount of vehicles that need to be procured.

As part of the annual planning process, Government Entities should assess their procurement needs and identify opportunities for GPP initiatives. The GPP Initiative Leaders are detailed in Annex D.

502 GPP Criteria

For ease of implementation, the GPP Guidelines define GPP Criteria for commonly purchased products, services and contracting works. The GPP Criteria are organized in two levels: Core Criteria and Comprehensive Criteria.

Core Criteria

Core Criteria address key environmental impacts, with a primary focus on energy and water consumption. The Core Criteria can be used by Government Entities with minimal verification effort, and they are designed

to have a positive impact on the LCC through, for example, lower energy and water consumption, lower maintenance costs, and/or lower cost of disposal.

Compliance with the Core Criteria is seen as a minimum for a purchase to comply with the GPP Guidelines, for all targeting and reporting requirements outlined in the GPP Guidelines.

Comprehensive Criteria

The Comprehensive Criteria address broader and more challenging environmental objectives, which may not be fully justified by a lower LCC and may lead to a more significant impact on purchase cost. The Comprehensive Criteria are intended for Government Entities who, under exceptional circumstances, want to go further in supporting environmental goals, for example on the occasion of special projects.

The following products, services and contracting works are examples of purchase categories for which GPP Criteria are developed:

Products

- Paper
- Light Vehicles
- Lights
- Furniture
- Air Conditioners (ACs)
- Household Appliances
- Water Fixtures and Fitting
- IT Equipment
- Cleaning Products
- Carpets

Services and Contracting Works

- Cleaning Contracts
- Event and Catering Contracts
- Maintenance
- Facility Management
- Retrofit Projects
- Solar Projects
- Building Design & Construction

Annex A includes the criteria, both core and comprehensive, for the covered products while Annex B details the criteria for the covered services and contracting works. The program of works for the GPP Criteria is detailed in Annex D.

For the purchase of products, services or contracting works which are not covered in either Annex A or Annex B, Government Entities may consider environmental aspects based on an LCC approach.

ANNEX A

GPP Criteria for Products

Copying and Graphic Paper (Category Code - A)	
Scope	This category includes standards for the purchase of copying and graphic paper. This includes unprinted paper for writing, printing and copying purposes sold in sheets or reels. Finished paper products such as notebooks, calendars, flyers etc. are not included.
Key Environmental Impacts	<ul style="list-style-type: none"> Forest destruction and potential loss of biodiversity Emissions to the air and water during pulp and paper production High energy and water consumption during paper production Chemical consumption during paper production Waste generation during paper production
Recommended Green Specifications	
Core GPP Criteria	
Paper must be purchased from suppliers with a valid supply contract.	
Paper must be certified by FSC (Forest Stewardship Council), PEFC (Program for the Endorsement of Forest Certification) or by other equivalent sustainable forest management standard organizations, and/or must include some recovered paper fibres.	
Recovered paper fibres include both post-consumer and pre-consumer recycled fibres.	
Comprehensive GPP Criteria	
Paper must be purchased from suppliers with a valid supply contract.	
Paper shall be made from 100% recovered paper fibres.	
Recovered paper fibres include both post-consumer and pre-consumer recycled fibres.	
Paper shall be Elementary Chlorine Free (ECF) or Totally Chlorine Free (TCF).	

Light Vehicles (Category Code – B)													
Scope	<p>This category includes standards for light vehicles, which are purchased, leased or rented. Light vehicles are vehicles with a gross weight less than 3,500 kg, including SUVs and pick-up trucks.</p> <p>Special-purpose vehicles such as armoured vehicles are excluded from the scope of this category.</p>												
Key Environmental Impacts	<ul style="list-style-type: none"> Greenhouse and air pollutant emissions during use of the vehicles, and along the supply chain Environmental impacts resulting from the manufacturing of batteries for electric vehicles 												
Recommended Green Specifications													
Core GPP Criteria													
Light vehicles must comply with ESMA fuel economy ratings indicated in the table below.													
	<table border="1"> <thead> <tr> <th>Light Vehicle Type</th> <th>Minimum ESMA Fuel Economy Rating</th> </tr> </thead> <tbody> <tr> <td>Economy Sedan</td> <td>Excellent</td> </tr> <tr> <td>Premium Sedan</td> <td>Excellent</td> </tr> <tr> <td>Pick-ups</td> <td>Good</td> </tr> <tr> <td>Economy SUVs</td> <td>Very good</td> </tr> <tr> <td>Premium SUVs</td> <td>not applicable</td> </tr> </tbody> </table>	Light Vehicle Type	Minimum ESMA Fuel Economy Rating	Economy Sedan	Excellent	Premium Sedan	Excellent	Pick-ups	Good	Economy SUVs	Very good	Premium SUVs	not applicable
Light Vehicle Type	Minimum ESMA Fuel Economy Rating												
Economy Sedan	Excellent												
Premium Sedan	Excellent												
Pick-ups	Good												
Economy SUVs	Very good												
Premium SUVs	not applicable												
Light vehicles must be equipped with a mechanism to display fuel consumption figures to the driver.													
The battery of electric vehicles must have a warranty for at least 150,000km or 5 years, whichever comes first, for the retention of 70% or more of its rated electricity storage capacity.													
Comprehensive GPP Criteria													
Light vehicles must comply with ESMA fuel economy ratings indicated in the table below, or should be hybrid or zero-emission vehicles.													
Zero-emission vehicles include electric and hydrogen fuel cell vehicles.													
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Light vehicles must be equipped with a mechanism to display fuel consumption figures to the driver.													
The battery of electric vehicles must have a warranty for at least 150,000km or 5 years, whichever comes first, for the retention of 70% or more of its rated electricity storage capacity.													
Cars shall not be replaced before 400,000km of mileage or seven years, whatever comes first.													

Indoor Lighting (Category Code - C)																	
Scope	<p>This category includes standards for indoor lighting, which are installed inside a building.</p> <p>The following specialist lighting types are excluded from the scope:</p> <ul style="list-style-type: none"> • Coloured lighting • Display lighting for museum and art galleries • Emergency escape lighting • Illuminated signs • Lighting fixed to machinery or equipment • Lighting for plant growth • Lighting for televised sports • Lighting for visually impaired persons • Lighting of monuments or historic buildings • Specialist medical lighting • Stage lighting 																
Key Environmental Impacts	<ul style="list-style-type: none"> • Greenhouse gas emissions as a result of the electricity consumption during use of lighting • Mercury emissions to the air, soil and water • Generation of waste, both hazardous and non-hazardous 																
Recommended Green Specifications																	
Core GPP Criteria																	
<p>Lights must be either LED or otherwise minimum ESMA 4 star rated. Preference shall be given to LED light, where technically feasible. Mercury vapour and incandescent lights of any type, including halogen lamps, are banned.</p>																	
<p>If lights are procured for an entire building, the lighting power density shall not exceed the following values:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="background-color: #4CAF50; color: white;">Building Type</th> <th style="background-color: #4CAF50; color: white;">Lighting Power Density (W/m²)</th> </tr> </thead> <tbody> <tr><td>Office</td><td>6.7</td></tr> <tr><td>Educational Facility</td><td>7.1</td></tr> <tr><td>Manufacturing Facility</td><td>9.2</td></tr> <tr><td>Retail (outlet/mall)</td><td>12.4</td></tr> <tr><td>Workshop</td><td>10.1</td></tr> <tr><td>Warehouse</td><td>6.2</td></tr> <tr><td>Labour Accommodation</td><td>5.6</td></tr> </tbody> </table> <p>Compliance shall be demonstrated through a calculation by the lighting designer showing the total power consumed by the lighting, including lamps, ballast, sensors and controls, divided by the building's total gross floor area.</p>		Building Type	Lighting Power Density (W/m ²)	Office	6.7	Educational Facility	7.1	Manufacturing Facility	9.2	Retail (outlet/mall)	12.4	Workshop	10.1	Warehouse	6.2	Labour Accommodation	5.6
Building Type	Lighting Power Density (W/m ²)																
Office	6.7																
Educational Facility	7.1																
Manufacturing Facility	9.2																
Retail (outlet/mall)	12.4																
Workshop	10.1																
Warehouse	6.2																
Labour Accommodation	5.6																
<p>If lights are procured for an individual space, the lighting power density shall not exceed the following values:</p>																	

Space Type	Lighting Power Density (W/m ²)
Conference/Meeting Room	5.9
Corridor & Lobby	3.9
Office	9.8
Interior Parking	2.0
Audience Seating Area:	
- Auditorium	5.9
- Convention Center	3.9
- Gymnasium	3.9

Compliance shall be demonstrated through a calculation by the lighting designer showing the total power consumed by the lighting, including lamps, ballast, sensors and controls, divided by the gross floor area of the indoor spaces.

For all new construction or renovation works, the following lighting controls must be provided:

- Occupant lighting controls in regularly occupied spaces, such as individual office rooms, which allow occupants to switch the lights on and off

The mercury content shall not exceed the following values:

Lighting Type	Mercury Content (mg/lamp)
Metal halide	≤ 10 mg
High pressure sodium	≤ 10 mg
CFL/fluorescent tubes	≤ 3 mg
LED	no mercury content

Lights must have a minimum lifespan as per the table below:

Lighting Type	Minimum Lifespan (operating hours)
Metal halide	8,000 hours
High pressure sodium	8,000 hours
CFL/fluorescent tubes	6,000 hours
LED	35,000 hours

Comprehensive GPP Criteria

Lights must be either LED or ESMA 5 star rated. Preference is to be given to LED light, where technically feasible. Mercury vapour and incandescent lights of any type, including halogen lamps, are banned.

If lights are procured for an entire building, the lighting power density shall not exceed the following values:

Building Type	Lighting Power Density
Office	3.8
Educational Facility	4.0
Manufacturing Facility	5.2
Retail (outlet/mall)	7.1
Workshop	5.7
Warehouse	3.5
Labour Accommodation	3.2

Compliance shall be demonstrated through a calculation by the lighting designer showing the total power consumed by the lighting, including lamps, ballast, sensors and controls, divided by the building's total gross floor area.

If lights are procured for an individual space, the lighting power density shall not exceed the following values:

Space Type	Lighting Power Density
Conference/Meeting Room	3.3
Corridor & Lobby	2.2
Office	5.6
Interior Parking	1.1
Audience Seating Area:	
- Auditorium	3.3
- Convention Center	2.2
- Gymnasium	2.2

Compliance shall be demonstrated through a calculation by the lighting designer showing the total power consumed by the lighting, including lamps, ballast, sensors and controls, divided by the gross floor area of the indoor spaces.

For all new construction or renovation works, the following lighting controls must be provided:

- Occupancy sensors for common areas which are not regularly occupied, such as corridors and lobbies, which reduce the lighting level to no more than 25% of normal when unoccupied
- Occupant lighting controls and daylight sensors in regularly occupied spaces, such as individual office rooms, which allow occupants to switch the lights on and off

Lights shall be procured from suppliers which are based in Ras Al Khaimah.

The mercury content shall not exceed the following values:

Lighting Type	Mercury Content (mg/lamp)
Metal halide	≤ 5 mg
High pressure sodium	≤ 5 mg
CFL/fluorescent tubes	≤ 1.5 mg
LED	no mercury content

Lights shall have a minimum lifespan as per the table below:

Lighting Type	Minimum Lifespan (operating hours)
Metal halide	16,000 hours
High pressure sodium	16,000 hours
CFL/fluorescent tubes	10,000 hours
LED	50,000 hours

Furniture (Category Code - D)	
Scope	<p>This category includes standards for furniture whose primary function is to be used for storage, placement or hanging of items or to provide surfaces where users can rest, sit, eat, study or work. This includes for example chairs, sofas, partition screens, filing cabinets, work station panels.</p> <p>Bed mattresses, fences, railing, ladders, playground equipment and furniture fitted into vehicles are excluded from the scope of this category.</p>
Key Environmental Impacts	<ul style="list-style-type: none"> • Forest destruction and potential loss of biodiversity • Emissions to the air and water during the furniture production • Health risk due to the release of toxic substances such as Organic Volatile Compounds (VOCs) • Waste of material due to premature end-of-life of sub-standard quality furniture
Recommended Green Specifications	
Core GPP Criteria	
The tenderer shall provide a minimum warranty of three years effective from the day of delivery of the product. The warranty shall cover repair or replacement.	
Comprehensive GPP Criteria	
The tenderer shall provide a minimum warranty of three years effective from the day of delivery of the product. The warranty shall cover repair or replacement.	
All virgin timber used in furniture must be certified by FSC (Forest Stewardship Council), PEFC (Program for the Endorsement of Forest Certification) or by other equivalent sustainable forest management standard organizations.	
A minimum of 30% of the timber used in furniture shall be from recycled wood.	
<p>The formaldehyde emissions shall be limited to:</p> <ul style="list-style-type: none"> • MDF board: release $\leq 8\text{mg}/100\text{g}$ (by test method EN120) • Plywood, solid wood/other panels: release $\leq 4\text{mg}/100\text{g}$ of free formaldehyde content (by test method EN120) or release $\leq 0.124\text{mg}/\text{m}^3$ (by test method EN717-1) 	
<p>The product shall not contain any heavy metal elements or compounds as listed below:</p> <ul style="list-style-type: none"> • Arsenic • Cadmium • Lead • Mercury • Phthalates • Halogenated organic substances 	

Air-Conditioners (Category Code - E)				
Scope	<p>This category includes standards for electrically operated unit air conditioners (ACs).</p> <p>Chilling packages and heat pumps are excluded from the scope of this category.</p>			
Key Environmental Impacts	<ul style="list-style-type: none"> • Primary energy consumption and associated greenhouse gas emissions during use of ACs • Release of ozone depleting gases which also contribute to global warming 			
Recommended Green Specifications				
Core GPP Criteria				
<p>Non-ducted split ACs shall, at a minimum, be ESMA 4 star rated.</p> <p>Ducted split ACs and packaged units shall, at a minimum, comply with the energy efficiency requirements listed in the table below.</p>				
Equipment Type	Rated Capacity (kW at T3)	Minimum Efficiency Full Load		Rating Conditions
		EER (Btu/h/W at T3)	COP (at T3)	
Ducted split AC	RC < 40	9.11	2.67	Tested as per ESMA standard no. UAE.S ISO 13253:2011
	40 ≤ RC < 70	8.87	2.60	
	70 ≤ RC < 223	8.43	2.47	
	223 ≤ RC	8.09	2.37	
Packaged AC unit	RC < 40	8.10	2.37	
	40 ≤ RC < 70	7.90	2.32	
	70 ≤ RC < 223	7.50	2.20	
	223 ≤ RC	7.20	2.11	
<p>The purchase of window ACs must be avoided.</p> <p>All AC equipment and systems must contain refrigerants with zero Ozone Depletion Potential (ODP) or with Global Warming Potential (GWP) less than 100.</p> <p>All CFCs and HCFC-22 do not comply with the ODP and GWP limits and cannot be used.</p> <p>The following refrigerants comply with the ODP and GWP limits and can be used:</p> <ul style="list-style-type: none"> • HFCC-123 • HFC-23 • HFC-134a • HFC-245fa • HFC-404A • HFC-407A • HFC-410A 				

- HFC-507A
- Carbon Dioxide (CO₂)
- Ammonia (NH₃)
- Propane

Comprehensive GPP Criteria

Non-ducted split ACs shall, at a minimum, be ESMA 5 star rated.

Ducted split ACs and packaged units shall, at a minimum, comply with the energy efficiency requirements listed in the table below.

Equipment Type	Rated Capacity (kW at T3)	Minimum Efficiency Full Load		Rating Conditions
		EER (Btu/h/W at T3)	COP (at T3)	
Ducted split AC	RC < 40	9.65	2.83	Tested as per ESMA standard no. UAE.S ISO 13253:2011
	40 ≤ RC < 70	9.40	2.75	
	70 ≤ RC < 223	8.93	2.62	
	223 ≤ RC	8.57	2.52	
Packaged AC unit	RC < 40	8.10	2.37	
	40 ≤ RC < 70	7.90	2.32	
	70 ≤ RC < 223	7.50	2.20	
	223 ≤ RC	7.20	2.11	

ACs shall be equipped with an inverter.

The purchase of window ACs must be avoided.

All AC equipment and systems must contain refrigerants with zero Ozone Depletion Potential (ODP) or with Global Warming Potential (GWP) less than 100.

All CFCs and HCFC-22 do not comply with the ODP and GWP limits and cannot be used.

The following refrigerants comply with the ODP and GWP limits and can be used:

- HFCC-123
- HFC-23
- HFC-134a
- HFC-245fa
- HFC-404A
- HFC-407A
- HFC-410A
- HFC-507A
- Carbon Dioxide (CO₂)
- Ammonia (NH₃)
- Propane

Household Appliances (Category Code - F)	
Scope	<p>This category includes standards for household appliances and covers the following products:</p> <ul style="list-style-type: none"> • Dishwasher • Washing machine • Dryer • Fridge • Freezer • TV
Key Environmental Impacts	<ul style="list-style-type: none"> • Primary energy consumption and associated greenhouse gas emissions during use • Release of ozone depleting gases which also contribute to global warming, during use and disposal
Recommended Green Specifications	
Core GPP Criteria	
Household appliances shall, at a minimum, be ESMA 3 star rated.	
<p>All fridges and freezers must contain refrigerants with zero Ozone Depletion Potential (ODP) or with Global Warming Potential (GWP) less than 100.</p> <p>All CFCs and HCFC-22 do not comply with the ODP and GWP limits and cannot be used.</p> <p>The following refrigerants comply with the ODP and GWP limits and can be used:</p> <ul style="list-style-type: none"> • HFCC-123 • HFC-23 • HFC-134a • HFC-245fa • HFC-404A • HFC-407A • HFC-410A • HFC-507A • Carbon Dioxide (CO₂) • Ammonia (NH₃) • Propane 	
Comprehensive GPP Criteria	
All household appliances shall, at a minimum, be ESMA 5 star rated.	
<p>All fridges and freezers must contain refrigerants with zero Ozone Depletion Potential (ODP) or with Global Warming Potential (GWP) less than 100.</p> <p>All CFCs and HCFC-22 do not comply with the ODP and GWP limits and cannot be used.</p> <p>The following refrigerants comply with the ODP and GWP limits and can be used:</p> <ul style="list-style-type: none"> • HFCC-123 • HFC-23 • HFC-134a 	

- HFC-245fa
- HFC-404A
- HFC-407A
- HFC-410A
- HFC-507A
- Carbon Dioxide (CO₂)
- Ammonia (NH₃)
- Propane

Water Fixtures and Fittings (Category Code - G)															
Scope	<p>This category includes standards for water fixtures and fittings and covers the following products:</p> <ul style="list-style-type: none"> • Hand wash basin faucet • Kitchen sink faucet • Ablution faucet • Toilet • Urinal • Shower head 														
Key Environmental Impact	<ul style="list-style-type: none"> • Water consumption during usage 														
Recommended Green Specifications															
Core GPP Criteria															
<p>All water fixtures and fittings must meet the maximum allowable flush and flow rates specified in the table below.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #4CAF50; color: white;">Fixture Type</th> <th style="background-color: #4CAF50; color: white;">Maximum Flow or Flush Rate</th> </tr> </thead> <tbody> <tr> <td>Hand Wash Basin Faucets</td> <td>1.9 litres per minute at 3 bar</td> </tr> <tr> <td>Kitchen Sink Faucets</td> <td>5 litres per minute at 3 bar</td> </tr> <tr> <td>Ablution Faucets</td> <td>6 litres per minute at 3 bar</td> </tr> <tr> <td>Dual Flush Water Closets</td> <td>4.5 litres full flush 3 litres part flush</td> </tr> <tr> <td>Urinals</td> <td>1 litre per flush</td> </tr> <tr> <td>Shower Heads</td> <td>8 litres per minute at 3 bar</td> </tr> </tbody> </table>		Fixture Type	Maximum Flow or Flush Rate	Hand Wash Basin Faucets	1.9 litres per minute at 3 bar	Kitchen Sink Faucets	5 litres per minute at 3 bar	Ablution Faucets	6 litres per minute at 3 bar	Dual Flush Water Closets	4.5 litres full flush 3 litres part flush	Urinals	1 litre per flush	Shower Heads	8 litres per minute at 3 bar
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Ablution Faucets	6 litres per minute at 3 bar														
Dual Flush Water Closets	3.5 litres full flush 2.5 litres part flush														
Urinals	Waterless urinals														
Shower Heads	6 litres per minute at 3 bar														

IT Equipment (Category Code - H)		
Scope	This category includes standards for IT Equipment which includes the following products: <ul style="list-style-type: none"> • Desktop computer • Small workstation • Computer monitor • Laptop • All-in-one multifunctional device for copying, printing and fax 	
Key Environmental Impacts	<ul style="list-style-type: none"> • Energy consumption particularly during use • Consumption of finite resources and critical raw materials to produce IT products • Generation of potentially hazardous waste electronic equipment upon disposal 	
Recommended Green Specifications		
Core GPP Criteria		
<p>The tenderer shall provide a minimum warranty of three years for laptops, desktops, computer monitors and small workstations and a minimum warranty of one year for multifunctional devices effective from delivery of the product. The warranty shall cover replacement or repair.</p>		
<p>The product shall comply with international power consumption standards such as Energy Star.</p>		
<p>The product shall comply with maximum energy consumption thresholds outlined in the table below.</p>		
Product Type	Sleep Mode	Off Mode
Desktop Computer	1.1W	0.3W
Monitor	0.9W	0.3W
Laptop	1.5W	0.3W
All-in-one multifunctional device	2.4W	0.8W
Comprehensive GPP Criteria		
<p>The tenderer shall provide a minimum warranty of three years for laptops, desktops, computer monitors, small workstations, and for multifunctional devices effective from delivery of the product. The warranty shall cover replacement or repair.</p>		
<p>The product shall comply with international power consumption standard such as Energy Star.</p>		
<p>The product shall comply with maximum energy consumption thresholds outlined in the table below.</p>		
Product Type	Sleep Mode	Off Mode
Desktop Computer	1.1W	0.3W
Monitor	0.9W	0.3W
Laptop	1.5W	0.3W
All-in-one multifunctional device	2.4W	0.8W
<p>Rechargeable batteries shall not be glued or soldered into portable products. It shall be possible for a professional user or repair service provider to replace the rechargeable battery.</p>		

Cleaning Products (Category Code - I)	
Scope	This category includes standards for cleaning products, excluding products which are used for disinfection and sanitisation purposes.
Key Environmental Impacts	<ul style="list-style-type: none"> • Release of chemicals which are harmful for humans and the environment • Raw material consumption
Recommended Green Specifications	
Comprehensive GPP Criteria	
Cleaning products must have an ecolabel, such as EU Ecolabel, Green Seal or equivalent, or must be based on organic ingredients.	

Carpeting (Category Code - J)	
Scope	This category includes standards for carpets
Key Environmental Impacts	<ul style="list-style-type: none"> Release of chemicals which are harmful for humans and the environment Raw material consumption
Recommended Green Specifications	
Core GPP Criteria	
Carpets shall use low-VOC adhesives with 50g of VOC per litre of adhesive or less, or be installed using hook fastener systems which do not required adhesive.	
Comprehensive GPP Criteria	
Carpets shall use low-VOC adhesives with 50g of VOC per litre of adhesive or less, or be installed using hook fastener systems which do not required adhesive.	
Carpets shall have an ecolabel, such as Green Label Plus, Greenguard or equivalent, or shall be made from wool instead of synthetic fibres.	

ANNEX B

GPP Criteria for Services and Contracting Works

Retrofit Projects (Category Code - K)	
Scope	This category includes standards for retrofitting of existing buildings.
Key Environmental Impacts	<ul style="list-style-type: none"> High energy and water consumption during the building operation Depletion of natural resources and greenhouse gas emissions associated with the manufacturing and transportation of building materials
Recommended Green Specifications	
Core GPP Criteria.	
Energy Service Companies (ESCOs) shall be accredited with Ras Al Khaimah Municipality.	
5% of the retrofit contract value must be sourced locally within the Emirate of Ras Al Khaimah.	
This may include locally sourced equipment, products and materials, and/or locally-sourced expenditure, subcontracts or man-hours for system design, installation, testing, commissioning, project management, operation & maintenance (O&M) and/or measurement, monitoring and verification (MMV).	
The building shall allow for real time monitoring of energy and water consumption.	
Comprehensive GPP Criteria	
Energy Service Companies (ESCOs) shall be accredited with Ras Al Khaimah Municipality.	
30% of the retrofit contract value must be sourced locally within the Emirate of Ras Al Khaimah.	
This may include locally sourced equipment, products and materials, and/or locally-sourced expenditure, subcontracts or man-hours for system design, installation, testing, commissioning, project management, operation & maintenance (O&M) and/or measurement, monitoring and verification (MMV).	
The retrofitting works shall include passive measures such as: <ul style="list-style-type: none"> Insulation of walls and roofs Higher efficient windows with double or triple glazing Improvement of air tightness 	

- Shading devices
- Light colour paints or highly reflective paints for walls and roofs
- Window tinting / low heat gain films

Buildings should be retrofitted to nearly zero energy buildings (nZEB) with a calculated energy use intensity of less than 90 kWh/m²/year.

Where feasible, it is encouraged to go beyond the nZEB standard and retrofit buildings to zero energy buildings. Zero energy buildings generate 100% of their energy needs on-site and thus have a calculated energy use intensity of 0 kWh/m²/year.

The building shall allow for real time monitoring of energy and water consumption.

Building Design and Construction (Category Code - L)	
Scope	This category includes standards for design and construction of new buildings.
Key Environmental Impacts	<ul style="list-style-type: none"> High energy and water consumption during the building operation Depletion of natural resources and greenhouse gas emissions associated with the manufacturing and transportation of building materials
Recommended Green Specifications	
Core GPP Criteria	
New buildings shall comply with Barjeel, the Green Building Regulations of Ras Al Khaimah issued by Ras Al Khaimah Municipality.	
30% of the building design and construction contract must be sourced locally within the Emirate of Ras Al Khaimah.	
This may include locally sourced products and materials, and/or locally-sourced expenditure, subcontracts or man-hours for the building design, testing and commissioning, construction and/or site supervision.	
Contractors shall provide a construction environmental management plan (CEMP).	
The building shall allow for real time monitoring of energy and water consumption.	
Comprehensive GPP Criteria	
New buildings shall comply with Barjeel, the Green Building Regulations of Ras Al Khaimah issued by Ras Al Khaimah Municipality.	
Buildings shall be designed as nearly zero energy buildings (nZEB) with a calculated energy use intensity of less than 90 kWh/m ² /year.	
Where feasible, it is encouraged to go beyond the nZEB standard and design buildings as zero energy buildings. Zero energy buildings generate 100% of their energy needs on-site and thus have a calculated energy use intensity of 0 kWh/m ² /year.	
70% of the building design and construction contract must be sourced locally within the Emirate of Ras Al Khaimah.	
This may include locally sourced products and materials, and/or locally-sourced expenditure, subcontracts or man-hours for the building design, testing and commissioning, construction and/or site supervision.	
Contractors shall provide a construction environmental management plan (CEMP).	
Contractors shall have an ISO 14001 certified environmental management system.	
The building shall allow for real time monitoring of energy and water consumption.	
The building shall achieve the highest possible green building rating, such as LEED Platinum, BREEAM Outstanding, Estidama 5 Pearl or equivalent.	

Solar Projects (Category Code - M)	
Scope	This category includes standards for solar PV projects.
Key Environmental Impacts	<ul style="list-style-type: none"> • Use of hazardous materials in manufacturing • Waste generation from decommissioning of PV panels
Recommended Green Specifications	
Core GPP Criteria	
Solar panels shall achieve at least an average efficiency of 18%.	
5% of the solar contract value must be sourced locally within the Emirate of Ras Al Khaimah. This may include locally sourced equipment, products and materials, and/or locally-sourced expenditure, subcontracts or man-hours for system design, project management, installation, testing, commissioning, and operation & maintenance (O&M).	
The solar panel manufacturer shall provide a warranty that the actual power output after 25 years shall not be less than 70% of the initial nominal output.	
Comprehensive GPP Criteria	
Solar panels shall achieve at least an average efficiency of 20%.	
40% of the solar contract value must be sourced locally within the Emirate of Ras Al Khaimah. This may include locally sourced equipment, products and materials, and/or locally-sourced expenditure, subcontracts or man-hours for system design, project management, installation, testing, commissioning, and operation & maintenance (O&M).	
The solar panel manufacturer shall provide a warranty that the actual power output after 25 years shall not be less than 75% of the initial nominal output.	
Solar panels shall be N-type solar panels.	
Contractor shall provide a recycling plan for PV panels.	

ANNEX C

GPP Initiatives

There are no GPP Initiatives included in this release of the GPP Guidelines. Future GPP Initiatives will be included as additional attachments to the GPP Guidelines and shall be issued by Ras Al Khaimah Municipality after endorsement from the EE&R Committee. Each GPP Initiative shall be fully defined and documented in its corresponding attachment, including at least the following:

- 1. Objectives of the initiative*
- 2. Scope of the initiative*
- 3. Responsibilities for implementation*
- 4. Timeline/plan of implementation*

ANNEX D

Program of Works

GPP Criteria

GPP Category	Category Leader	Status	Plan
Paper	DoF	Available	Review by December 2023
Light Vehicles	PSD	Available	Review by December 2023
Lights	RAKEZ	Available	Review by December 2023
Furniture	DoF	Available	Review by December 2023
Air Conditioners (ACs)	RAKEZ	Available	Review by December 2023
Household Appliances	RAK MUN	Available	Review by December 2023
Water Fixtures and Fittings	RAK MUN	Available	Review by December 2023
IT Equipment	EGA	Available	Review by December 2023
Cleaning Products	EPDA	Available	Review by December 2023
Retrofit Projects	RAK MUN	Available	Review by December 2023
Solar Projects	RAK MUN	Available	Review by December 2023
Building Design and Construction	RAK MUN	Available	Review by December 2023
Cleaning Contracts	N/A	Not started yet	Assign Category Leader by December 2020
Event and Catering	N/A	Not started yet	Assign Category Leader by December 2020
Maintenance	N/A	Not started yet	Assign Category Leader by December 2020
Facility Management	N/A	Not started yet	Assign Category Leader by December 2020

GPP Initiatives

GPP Initiative	Initiative Leader	Status	Plan
Reduce Single Use Plastic	IDO	Development in progress	Issuance by December 2021

ANNEX E

Target Definition and Reporting Templates

Reporting Entity:			
Reporting Year:			
GPP Category	Selected for Adoption (Yes/No)	Target GPP compliance (% of compliant spending)	Achieved GPP compliance (% of compliant spending)
Paper			
Light Vehicles			
Lights			
Furniture			
Air Conditioners (ACs)			
Household Appliances			
Water Fixtures and Fittings			
IT Equipment			
Cleaning Products			
Retrofit Projects			
Solar Projects			
Building Design and Construction			
Cleaning Contracts			
Event and Catering			
Maintenance			
Facility Management			
Total (across all GPP categories)			
Other spend (for which GPP criteria are not defined)			
Overall (across all spend)			