# City Manager's Weekly Report

Friday, May 27, 2016

## **Department:**

Administration - City Manager

#### **Notable Notes:**

Mayor and Council - You will recall comments were made at your recent Council meeting regarding lines of patrons in front of several of our restaurant/bar establishments late in the evening. We share the following insight: It is our Police and Codes experience that when lines to enter are observed during busy holiday or event evenings the businesses are in fact managing the crowds (two out = two in). Both Newark Police and Codes talk to the managers of the bars and remind them of the occupancy limits throughout the year and in advance to major events (St. Patty's Day and end of school year). They report that the managers are very receptive of these discussions and about the legal limits of occupancy. Furthermore, they are also aware that if they are overcrowded that Code, Fire or NPD will have the establishment vacated until they are at a safe number and all three that were specifically mentioned (Grotto's, Catherine Rooney's and Klondike Kate's) have been very cooperative.

The US Department of Transportation has issued its *Every Place Counts Design Challenge* that seeks to raise the awareness about bifurcated neighborhoods, identify innovative practices to reconnect communities and improve transportation services. The Challenge is accepting applications that will be reviewed by a multimodal review panel who will select one community from each region to be provided a 2-day design session this summer. A copy of the challenge information is attached for reference. We notified them of our intent to submit an application by the May 20th deadline and are currently preparing a submission. The timeline on the opportunity was short as I received the detail on May 4th and the actual application is due June 3rd. However, we had a bit of a head start in that improving the various transportation options and connectivity within Newark has already been on our radar. You will recall its being part of the Comprehensive Plan, and DART First State has been involved with UD's Institute of Public Administration regarding the organization of existing system information to improve awareness/ridership. Both the IPA and DART have committed to participating with Newark in this opportunity if we are selected. We will share the application when complete early next week.

After over a year of back and forth DelDOT has finally provided its approval for the proposed Sculpture Garden that the DNP Design Committee has been working on with CSX at the location on South Main Street. This approval was needed in relationship to DelDOT's right-of-way authority associated with the existing new sidewalk. The Committee and staff will now reengage CSX regarding an agreement to develop the Sculpture Garden as an arts cultural improvement to the transition to South Main Street on the CSX property. I expect a presentation to be made to Mayor and Council at an upcoming meeting that will better familiarize you with the project.

Just a reminder that Finance Director Lou Vitola's last day with Newark is next Tuesday, May 31st. Although Lou's time with Newark has been only three years, his leadership and enthusiasm for his work and assistance in moving our organization and community forward allowed for great progress and accomplishments to be realized over these years. It has been a great pleasure to work with Lou, and I look forward to working with him in his new role at DEMEC. As of Wednesday, June 1st, Dave Del Grande will take over our financial leadership position. As you know, Dave has been working alongside Lou this month and has jumped right in and has engaged well with our departments and staff. I fully expect the transition to be smooth!

#### **Activity or Project:**

| DEMEC  |  |   |
|--|--|---|
| Description:   |  |   |
| Attached is a report or 2019/2020.   | the surprising results of the F  | PJM 2016 Capacity Auction for delivery year   |
| Status:  | Completed  |   |
| Expected Completion:   | 5/25/2016  |   |
| Execution Status:  | On Track   |   |
| Activity or Project:   |  |   |
| Bikes on Sidewalks Enf   | orcement Efforts   |   |
| Description:   |  |   |
| Solicitor Herron advise tickets for bicycles and so in the recent past. • does not remember issuery difficult to issue for requested and when the citation. • Parking staff on Main Street for the them know it is illegal this for a period of time While our Police Departencouraged to enforce concerns. I can report a Special Operations Office | s that our Code does appear to skateboards on sidewalks, and Discussion with our senior musting a citation for riding a bike or riding bicycles on the sideway do, they rarely have identify discussed the matter further purpose of engaging bike and and dangerous, and issuing citally it may work to get the work that in recent months almost that in recent months almost including monses have been issued by present the same of t | erns Noted at Recent Council Meetings: • City o give Parking Ambassadors the right to issue d for jaywalking, although they have not done ost Parking Ambassador revealed that she e on the sidewalk and that tickets were alk because rarely will they stop when ification which can be used to issue a and suggest placing two PAs with safety vests /or skateboard riders on sidewalks and letting rations if necessary. The hope is that if you do dout and a September roll out is planned. • on bike enforcement, officers have been er duties given the increased occurrences and two dozen summonses have been issued by ng bicycles or skateboards. In addition, patrol officers in recent weeks that were |
| Status:  | Started  |   |
| Expected Completion:   | 5/26/2016  |   |
| Execution Status:  | On Track   |   |
| Activity or Project:   |  |   |
| AETNA - EMS Week   |  |   |
|  |  |   |

## Description:

As shared by Aetna including photo attachment: Aetna Hose, Hook & Ladder Co. of Newark recently celebrated the 42nd Annual "Emergency Services Week" with a barbecue at Fire Station 8. Aetna renowned Chefs Ralph Tucker and Dan Seador grilled pork, hamburgers and hot dogs. EMS Lt. Chris Zistl led a recently formed, "Feeding the Finest" crew, a group of Aetna members, in creating numerous side dishes. Desserts and give away items were donated by Bing's Bakery, Rita's Water Ice, Greene Turtle, Duck Donuts, Iron Hill Brewery, Klondike Kate's, Claymont Steak

Shop, Malin's Market & Deli, National 5&10, and Grotto Pizza. Amy Fitzgerald, the Deputy Chief of EMS at Aetna, said "The purpose of EMS Week is to ensure that the contributions of EMS practitioners, those people on medicine's "front lines" are celebrated and fully recognized. EMT's and Paramedics safeguard the health, safety and well being of the citizens in their communities." Aetna Fire Chief Drew Bowerson said "EMS Week is an opportunity to publicize the contributions of the members of Aetna Hose, Hook & Ladder Co. to the Newark community. Our firefighters and EMT's work together closely at emergency scenes. With close to 9,000 EMS calls for service annually, it is not uncommon to see a fire engine and an ambulance both at the scene of a medical emergency in Newark." The barbecue attracted Aetna members and their families, local business sponsors, and officers and members of surrounding fire and EMS companies.

Status: Started

| Status:                 | Started                          |  |
|-------------------------|----------------------------------|--|
| Expected Completion:    | 5/16/2016                        |  |
| Execution Status:       | On Track                         |  |
|                         |                                  |  |
| Department:             |                                  |  |
| Alderman's Court        |                                  |  |
| Notable Notes:          |                                  |  |
| The past two weeks we h | nave held six court sessions and | two case review sessions.  |
| Activity or Project:    |                                  |  |
| Court Sessions          |                                  |  |
| Description:            |                                  |  |
| transported 3 prisoner  | s from various prisons for cas   | 30 capias returns,11 videos and 1 plea. We es also. We held 19 case reviews during case ents of which 807 were made online through |
| Status:                 | Completed                        |  |
| Expected Completion:    | 5/24/2016                        |  |
| Execution Status:       | Completed                        |  |
| Activity or Project:    |                                  |  |
|                         |                                  |  |
| Description:            |                                  |  |
|                         |                                  |  |
| Status:                 |                                  |  |
| Expected Completion:    |                                  |  |
| Execution Status:       |                                  |  |

| Activity or Project:  |   |  |
|---|---|--|
|   |   |  |
| Description:  |   |  |
|   |   |  |
| Status:   |   |  |
|   |   |  |
| Expected Completion:  |   |  |
| Execution Status:   |   |  |
|   |   |  |
| Department:   |   |  |
| Electric Department   |   |  |
| Notable Notes:  |   |  |
| The line crews continued went bad on Orchard Ro   | d working at the West Main Substation and fixed underground primary cables that pad.  |  |
| The electricians started installing the ground grid at the West Main Substation in preparation for the fence expansion. The fence contractor is scheduled to come in Saturday and set the posts. The electricians also repaired an HVAC blower motor at the Police Department, fixed a timer for a court light at Fairfield Crest Park, installed pole tags where needed, pulled communication wire at the gas pumps, and helped engineering verify SCADA operation after changes were made by the developer. |   |  |
| Engineering has been working to get quotes for dehydrating a substation transformer after the oil analysis came back as wet, sent load analysis for several homes to SolarCity for preliminary design, and worked with a consultant on the recloser project specifications.   |   |  |
| Activity on Ducinety  |   |  |
| Activity or Project: West Main Substation   | Reconfiguration   |  |
| Description:  | Recomiguration  |  |
|   | t and poles and reconfiguring other circuits and poles at the West Main   |  |
| _   | t and poles and reconfiguring other circuits and poles at the West Main tion for a new substation transformer currently being built and to be ar. |  |
| Status:   | In-Progress   |  |
| Expected Completion:  | 10/31/2016  |  |
| Execution Status:   | On Track  |  |
|   |   |  |
| Activity or Project:  |   |  |
|   |   |  |

| Description:         |  |
|----------------------|--|
| Status:              |  |
| Expected Completion: |  |
| Execution Status:    |  |
| Activity or Project: |  |
| Description:         |  |
|                      |  |
| Status:              |  |
| Expected Completion: |  |
| Execution Status:    |  |
|                      |  |
| Department:          |  |
| Finance Department   |  |

## **Notable Notes:**

As the last weekly report that contains the efforts of Mr. Lou Vitola, I would like to personally thank Lou for all of his hard work and dedication that he has given the City of Newark over his career. Lou has been running at 100 mph with me since May 2nd, and I am forever grateful for the time and attention that he has given to me directly, getting me up to speed on "everything Newark." The Department of Finance is truly going to miss seeing Lou every day, but happy to know that our office will still see Lou on occasion in his new role with DEMEC. May 31 will be officially Lou's last day here at the City.

On 5/23 Mr. Vitola and I attended the bi-monthly Council meeting. We would like to thank Council for their support of the selection of Vanguard and PFM as our new consultants. Vanguard has been selected as the pension and OPEB investments consultant, and PFM as the manager of the City's cash reserves.

On 5/26, I will attend the Delaware League of Local Government's Monthly Meeting. Tony DePrima, Executive Director of the Delaware Sustainable Energy Utility, will speak about new loan and grant initiatives for municipalities and residential homeowners. In particular, a new grant to fund Energy Efficiency Measures will be announced. Other opportunities include low-interest loans for construction energy efficiency improvements and renewable energy projects, and LED street light conversions. Mr. DePrima will report on findings of energy assessments already completed in select towns and cities and review the DSEU residential program benefits with League members. DSEU continues to improve links to municipal web sites and expand its promotion of energy savings to Delaware citizens.

Accounting staff is continuing the rigorous year-end accounting close and financial reporting process, which includes the independent financial audit and the development of the 2015 Comprehensive Annual Financial Report (CAFR). Additional notes related to the audit process are reported in the projects below.

Over the past week we have begun one of our peak seasons, during which the vast majority of student renters move out and either transfer or terminate their utility services. Our statistics over the last week and next week will reflect high volume and lower than usual service levels. Once data is gathered for next week, I will provide some comparables and include in my weekly.

Our Deputy Finance Director attended the annual GFOA conference in Toronto this week; coming back with much information to share with the staff. The GFOA continues to be a valuable resource to the Finance Department.

| Activity | or / | Pro | iect: |
|----------|------|-----|-------|
| ,        |      |     | ,     |

Payments and Utility Billing (PUB)

#### Description:

The group handled 937 phone calls the last week. The average call length of 3:46 last week was strong, while the average hold & queue time (average speed of answer) increased from 2:16 to 3:09 due to the increase in call volume. Our Welcome Center staff greeted 283 visitors in the past week, while service orders initiated by PUB in response to calls and visitors doubled to 517 for the same period. The group processed 3,354 utility payments and CityView transactions, 340 of which were imported automatically with our new electronic processes and 2,228 of which were imported via web, lockbox or preauthorized payment (PAP) over the last week.

Status: In-Progress

Expected Completion: 12/31/2016

Execution Status: On Track

#### **Activity or Project:**

Independent Financial Audit

#### Description:

Audit status: CAFR sent to CLA for initial review. CLA target issue date is week of June 13-17, 2016. Mr. Vitola and I are finalizing the Management Discussion & Analysis component of the Comprehensive Annual Financial Report (CAFR). Our Communications team is working on the visuals for the CAFR dividers this year.

Status: Near Completion

Expected Completion: 6/30/2016

Execution Status: On Track

## **Activity or Project:**

Budget

## Description:

Preliminary internal budget meetings continue. The timeline for the budget process can be found on Budget Central via this link: http://cityofnewarkde.us/DocumentCenter/View/6648

Status: In-Progress

| Expected Completion: | 9/30/2016 |
|----------------------|-----------|
| Execution Status:    | On Track  |

#### **Department:**

Parks and Recreation Department

#### **Notable Notes:**

Director: Met with Information Technology (IT) regarding work order reporting, met with the Parks maintenance staff regarding upcoming projects and the work order system reporting, assisted with Bike To Work Day set up and attended the event, worked on several budget estimates for the 2017 budget, reviewed and commented on two landscape plans for construction projects, conducted Parks maintenance meeting with the Parks Superintendent and Supervisor to discuss this week's work order schedule.

Recreation Superintendent: Updated Rittenhouse Camp staff manual and recreation personnel manual in preparation for the upcoming orientation for summer staff, met with IT regarding the work order reports available with the program, attended two demonstrations for recreation registration software programs, attended the gymnastics expo at Downes Elementary School highlighting the participants in the program; each received certificates and medals, reviewed the Camp GWC and lifeguard manuals, forwarded completed and approved flyers to recreation staff to start advertising to previous participants for upcoming programs, processed employment status reports for Rittenhouse Camp staff, continued to gather background check information on summer staff to submit to the state.

Recreation Supervisor of Athletics: Checked both pools regularly and adjusted chemicals as needed; met with coaches of Adult Co-Rec Softball league prior to first games starting on May 19; updated PSAs for June programs; updated summer staff employee manuals for Camp GWC and Lifeguards; attended the Gymnastics program performance at Downes Elementary School; our latest session of Afterschool Tennis at Downes ended on May 16 with 15 kids participating; Rittenhouse payment letters were sent out; started collecting the location of light poles and emergency phones along the Hall Trail in ArcGIS.

Recreation Supervisor of Community Events: Worked on items related to several upcoming and ongoing programs (4<sup>th</sup> of July, Spring Concert Series, Newark's Youth's Got Talent, and Camp R.E.A.L.), as well as, wrapping up some items from the Newark Memorial Day Parade. Staff has been selected for Camp R.E.A.L. The third week of concerts was held with Caitlin Marsilii and The Jimmies. The attendance was great (25/100) and the attendees continue to be excited about the upcoming concerts.

George Wilson Center and Volunteer Coordinator: Conducted phone interviews with potential summer camp volunteers; sent thank you emails to Memorial Day Parade Volunteers; 1 volunteers devoted a total of **30** hours assisting in the Parks and Recreation Office and the George Wilson Community Center; 1 volunteer devoted **5** hours landscaping and removing invasive plant species along the James F. Hall Trail; hosted a staff meeting for George Wilson Center attendants on Monday, May 16; sent contracts to potential summer camp staff; interviewed a potential Camp GWC Director, organized and cleaned the office at the George Wilson Center; finalized Camp GWC field trips for bus bids to be sent out; began creating schedules for GWC attendants and lifeguards; began status reports for summer staff. Total volunteer hours for the week of 5/16-5/21: **35** Hours.

Parks Superintendent: Inspected eight park areas and developed work orders as needed, supervised planting installation on South Main Street Island #6, reviewed one development for the 2-year warranty inspection release of funds, met with Parks Director concerning landscape plan at Astro Plaza, met with mowing contractor to get quote on additional storm water area coming on board in 2017 for upcoming budget, met with homeowner about tree issues, along with Parks Supervisor met with potential YBC crew

leader, and reviewed landscape plan for proposed development needs, and watered nursery stock as needed.

Parks Supervisor: Coordinated unloading/storage of play equipment shipment and annual delivery, assigned work orders and assisted as needed, dragged/scarified ball fields, continued working on Munis work order system to customize the program to fit Park Department needs, and watered nursery stock as needed.

Parks and Horticulture Staff: Continued mowing operations, dragged/scarified all ball fields, raked off all horseshoe pit areas, set up/removed stages for concert series on Main Street, completed retrofitting play units at White Chapel and George Reed Parks, did planting installation on South Main Street Island #6 including watering in the plant materials, did interior bed maintenance including changing out/adding some plant materials, unloaded/stored away play equipment delivery and placed annual plant material in nursery holding area, cut several stumps lower then ground them out at City Yard, assisted with set up/take down for Bike to Work Day, and stored away all materials/supplies from Memorial Day Parade.

| Activity or Project:  |   |  |
|-----------------------|---|--|
| Summer Camps          |   |  |
| Description:          |   |  |
| recruitment continues | as well planning efforts for th<br>mp G.W.C and Camp R.E.A.L. \ | n for the start of our summer season. Staff e daily activity calendars and schedules for We expect over 600 children to participate in |
| Status:               | Not Started   |  |
| Expected Completion:  | 6/20/2016   |  |
| Execution Status:     | On Track  |  |
| Activity or Project:  |   |  |
| Description:          |   |  |
| Status:               |   |  |
| Expected Completion:  |   |  |
| Execution Status:     |   |  |
| Activity or Project:  |   |  |
| Description:          |   |  |
| Status:               |   |  |

| Expected Completion: |  |
|----------------------|--|
| Execution Status:    |  |
|                      |  |

#### **Department:**

Planning and Development Department

#### **Notable Notes:**

#### **Building Maintenance**

- This week Facilities Maintenance performed the following:
  - o Began replacing fascia and soffit at Rittenhouse Park;
  - o Coordinated HVAC repairs in Police Department;
  - Framed and dry-walled partition in Parking Office;
  - Hung blinds in Code Enforcement;
  - o Installed K9 retirement plaque in Police Department;
  - o Ordered parts for broken toilet in Alderman's Court.

#### **Code Enforcement**

- On Thursday Code Enforcement Manager Dave Culver and Planning and Development Director Maureen Feeney Roser met with representatives of Dover Planning and Inspections to discuss our permitting process.
- Property Maintenance Inspectors are checking the various student rental areas during move-out this week and next.
- The Fire Inspector is attending training with the State of Delaware.
- Staff attended a Pre-Fireworks Meeting with Parks and Recreation Department staff.
- Building renovation plans for Main Street Movies 5 in Newark Shopping Center are under review.
- The footer/foundation and slab installation work for University of Delaware's South Academy Street dormitory is ongoing.
- The framing work is ongoing at 60 North College Avenue, 52 North Chapel Street and Astra Plaza on Main Street.
- Work is continuing at the Washington House Condominiums located at 113 East Main Street.
- Property Maintenance is addressing numerous issues related to high grass and weeds.

## **Economic Development**

• Considerable time was spent this week preparing historic information on the formation of the Downtown Newark Partnership, its membership and operating procedures, etc. as a resource for a sub-committee of the Board looking at its structure.

#### **Parking**

• Parking Manager Marvin Howard attended the International Parking Institute Conference last week.

- The Parking Division will be scheduling interviews for parking attendants next week.
- Facilities Maintenance Supervisor Dave Greenplate and his maintenance team have been working in the Parking Office to fit out additional space for Parking Ambassadors.

## **Planning**

- Considerable time was spent this week preparing for the June Planning Commission meeting. On the agenda are:
  - Review and consideration of a <u>Comprehensive Development Plan</u> amendment, rezoning and major subdivision with site plan approval plan for 1101 and 1107 Barksdale Road, to be known as Barksdale Green;
  - Review of amendments to the <u>Zoning Code</u> to clarify exceptions for height and setback; and
  - Discussion of <u>Code</u> mandated parking requirements and parking waiver program study.
- Some time was spent this week preparing the 0 Darien Road annexation, rezoning and minor subdivision packet for Council consideration. The project is scheduled for first reading June 13<sup>th</sup>, with second reading and public hearing scheduled for July 11<sup>th</sup>.
- Some time was spent preparing the Council packet for Lang Development Group's request for a revision to the approved subdivision plan elevations for 60 North College Avenue, known as North College Crossing. The matter is scheduled for Council review at the June 13 th meeting.
- Considerable time was spent this week preparing the Department's Operating Budget submittals for the Department's Divisions of Planning/Land Use, Code Enforcement and Parking.
- On Friday Maureen joined Councilwoman Hadden and Special Counsel Max Walton at the Boy Scouts' Duty to God and Country Breakfast.
- Also on Friday Development Manager Mike Fortner and Maureen met with a Main Street property owner to discuss development potential and zoning of his parcel, and the development process.
- On Tuesday Maureen attended Task Manager training.
- On Tuesday afternoon Maureen met with one of the owners of One Easton to discuss the
  project and its completion. At this point, they have signed 8 leases which are not with
  college students and expect the number to rise through their outreach efforts to area
  corporations.
- Also on Tuesday afternoon, Maureen and Mike met with an attorney and an engineering firm to discuss a potential minor subdivision along Paper Mill Road.
- This week the Department received revised plans for the annexation, rezoning, major subdivision and special use permit for the intersection of Marrows and Ogletown Roads to accommodate a proposed auto retail and service center for Martin Honda. The plans have been distributed to the Subdivision Advisory Committee for review and comment.
- On Wednesday morning Maureen and Planning and Development management staff met with Councilwoman Wallace to discuss departmental responsibilities and organization.
- On Wednesday afternoon Maureen met with the owners of 0 Darien Road and former Mayor Funk to discuss the Council review process and the Planning Commission recommendation for their project.
- Also on Wednesday afternoon, Maureen met with Chris Locke of Lang Development Group to discuss a potential re-subdivision of Twin Lakes.
- This week the Subdivision Advisory Committee letter for the annexation, rezoning, major

subdivision with site plan approval revised plans submittal for the Leahy Property (0 Valley Road) was prepared and sent to the engineer for the project. Revised plans will have to be submitted and reviewed before the project can proceed to Planning Commission for consideration.

- On Thursday Mike attended the WILMAPCO Technical Advisory Committee meeting and the Newark Bicycle Committee meeting.
- On Wednesday, Mike attended the American Planning Association webinar "Taking Planning into the Schools" on opportunities and techniques to teach young people about City planning.
- Mike is processing the application for a Promoting Owner Occupancy of Homes (POOH) application. Settlement is scheduled for June 3<sup>rd</sup>.
- There was no Board of Adjustment meeting scheduled for May.
- The following was also completed this week:
  - o 10 Deed Transfer Affidavits
  - o 37 Building Permit Reviews
  - o 1 Certificate of Occupancy

| Activity | or or | Pro | iect: |
|----------|-------|-----|-------|
| ~~c.v.c, | · • • |     | ~~.   |

**Downtown Development District** 

### Description:

At Monday night's Council meeting, Council approved a resolution to support the City's application for Downtown Development District designation. Council had suggestions for improving the application which will be incorporated into the final version, which is to be submitted by June 1st to the State's Office of Planning Coordination.

| Status:              | In-Progress |  |
|----------------------|-------------|--|
| Expected Completion: | 6/1/2016    |  |
| Execution Status:    | On Track    |  |
|                      |             |  |

## **Activity or Project:**

Bike to Work Day

#### Description:

On Friday Mike helped coordinate Newark's Bike to Work Day event. An estimated 50-70 people attended the event. There were speeches by City Manager Carol Houck and University of Delaware Provost Domenico Grosso. The Newark Bicycle Committee presented Charlie Emerson with the "Bicycle Friendly Community Leader Award" for his years of service as the City of Newark's Parks and Recreation Director.

### **Activity or Project:**

| Description:   |  |  |  |  |
|--|--|--|--|--|
|  |  |  |  |  |
| <b>.</b>   |  |  |  |  |
| Status:  |  |  |  |  |
| Expected Completion:   |  |  |  |  |
| Execution Status:  |  |  |  |  |
|  |  |  |  |  |
| Daniel III and |  |  |  |  |
| Department: Police Department  |  |  |  |  |
| ·  |  |  |  |  |
| Notable Notes:   | Annana Andrew University Delice Chief Keyin Farany and Lieuterset Bill   |  |  |  |
| Hargrove have been con   | Manager Andrew Haines, Deputy Police Chief Kevin Feeney, and Lieutenant Bill ducting the initial interviews for police applicants, who recently passed the written ranked qualified candidates will move onto the background investigation stage.                  |  |  |  |
| applying for the rank of   | Chief Tiernan and all four (4) department Lieutenants completed the interview process with candidates applying for the rank of Master/Corporal and Sergeant. The "Chief's Score" will be averaged in with the written examination and oral board interview scores. |  |  |  |
| In June, applications will be accepted for the positions of Captain and Lieutenant. With the recent retirement of Captain Potts, there will be an opening for Captain, Lieutenant, Sergeant, and Master/Corporal.  |  |  |  |  |
| Recently, members of the Newark Police Department Street Crimes Unit and officers from the Natural Resources Police State Parks Enforcement executed a search warrant at an apartment in the 200 block of Main Street. During the search, officers located 62 dosage units of LSD, 3,522 grams of raw and edible marijuana products along with drug paraphernalia and several stolen street signs. The suspect, who had previously been arrested for possessing 460 grams of marijuana, called himself "The Baker" and his apartment "The Bakery". Several comments from the public have been posted in the media and on Facebook that selling edible marijuana is a harmless crime. These posts fail to mention that LSD was also found during the search.  |  |  |  |  |
| Planning continues for UNewark.  | Iniversity of Delaware graduation weekend, Alumni weekend, and New Night in  |  |  |  |
| Activity or Project:   |  |  |  |  |
| N/A  |  |  |  |  |
| Description:   |  |  |  |  |
| N/A  |  |  |  |  |
|  |  |  |  |  |
| Status:  | Completed  |  |  |  |
| Expected Completion:   | 5/26/2016  |  |  |  |
| Execution Status:  | Completed  |  |  |  |
|  |  |  |  |  |

| Activity or Project:   |                      |  |
|------------------------|----------------------|--|
|                        |                      |  |
| Description:           |                      |  |
|                        |                      |  |
| Status:                |                      |  |
| Expected Completion:   |                      |  |
| Execution Status:      |                      |  |
| Activity or Project:   |                      |  |
|                        |                      |  |
| Description:           |                      |  |
|                        |                      |  |
| Status:                |                      |  |
| Expected Completion:   |                      |  |
| Execution Status:      |                      |  |
|                        |                      |  |
| D                      |                      |  |
| Department:            | _                    |  |
| Public Works and Water | Resources Department |  |

#### **Notable Notes:**

Tim Filasky and Jason Winterling attended the APWA "Show for Snow" this week and found it to be a great source of new ideas. Both are now certified "Winter Maintenance Supervisors" and were able to meet with many equipment vendors and share information with other Public Works personnel from around the country. We are going to be meeting within the next couple of weeks to review potential changes to our snow plan and will then bring these changes to Council for review and comment.

This Monday from 6 to 7 was the first open water swim at the reservoir. There were 27 swimmers and the event was extremely well received by those who participated.

We have received our new Discount Disposal Agreement for DSWA which is going to result in a reduction in our tipping fees beginning in July.

We have finalized a design that would add buffered bike lanes and a mid block crosswalk to Apple Road assuming positive feedback from the residents in the area. The crosswalk will have a central pedestrian refuge island, significantly improving safety while improving the ability for area residents to walk to the Park N Shop Center. We are also gathering quantities for a bike lane striping refresh on Academy Street.

As our lobbyist pointed out at Council this past Monday night the Delaware Sediment and Stormwater Regulations have been thrown out by the Delaware Supreme Court on a technicality around how they were first adopted. DNREC has since enacted "Emergency Regulations" which will be in place for six

months while they work through the process to promulgate new regulations through the proper process. They have also been charged with making improvements to the regulations through a "Regulatory Advisory Committee" process which includes engineers, developers, contractors, and regulators in the process. The problem with this is that the regulations effectively need to be ready by mid-June in order to meet the six month deadline, which is looking at this point at least to be infeasible. DNREC is seeking an extension to the six month period and should have guidance shortly. There doesn't seem to be a good feel for what happens if they don't get the extension and, as a result, don't meet the deadline. Some argue that we would revert back to the regulations that were in place prior to 2014 and others argue that there would be no regulations in place at all. Fortunately for Newark, we left the old regulations in our code so we would fall back to how things were done prior to 2014 for sure. I will keep you advised as to whether or not DNREC receives the extension and hits the required deadlines.

| - 7 |                             |             |  |  |  |  |  |  |  |  |  |
|-----|-----------------------------|-------------|--|--|--|--|--|--|--|--|--|
|     | 2016 Water Main Replacement |             |  |  |  |  |  |  |  |  |  |
|     | Description:                |             |  |  |  |  |  |  |  |  |  |
|     | As of today, they plan      |             | eek as this is the first street they possible Main Street overnight on June 6to Center Street. |  |  |  |  |  |  |  |  |
|     | Status:                     | In-Progress |  |  |  |  |  |  |  |  |  |

Execution Status: On Track

## **Activity or Project:**

**Activity or Project:** 

2016 ADA Ramp Contract

Expected Completion: 11/30/2016

#### Description:

We received bids this week and pricing came in under budget. We are preparing the recommendation and hope to have this to Council for the June 3th or 27th meetings.

Status: In-Progress

Expected Completion: 11/30/2016

Execution Status: On Track

## **Activity or Project:**

**Louviers Tank Painting** 

#### Description:

We received bids this week and pricing came in under budget. We are preparing the recommendation and hope to have this to Council for the June 3th or 27th meetings.

Status: In-Progress

Expected Completion: 11/30/2016

Execution Status: On Track

| 5/22/2016 | to 5/28/2016 |  |
|-----------|--------------|--|

#### **Carol Houck**

From:

Department of Transportation <usdot@public.govdelivery.com>

Sent:

Wednesday, May 4, 2016 12:39 PM

To:

Carol Houck

Subject:

U.S. Department of Transportation Launches Every Place Counts Design Challenge



Having trouble viewing this email? View it as a Web page.



WASHINGTON – U.S. Transportation Secretary Anthony Foxx today announced the *Every Place Counts* Design Challenge, which aims to raise awareness about existing transportation infrastructure barriers and identify innovative solutions to reconnect communities to jobs, healthcare, education, and other essential services. The Challenge will bring together mayors and tribal leaders, working with designers, architects, engineering and planning experts to compete to receive on-site technical assistance with transportation planning and conceptual design from experts in the field.

The *Every Place Counts* Design Challenge builds on Secretary Foxx's efforts to highlight the long-lasting impacts of transportation decisions on communities across the country. Last month, Secretary Foxx launched a national dialogue on the legacy of transportation infrastructure projects that divided neighborhoods, cut off residents from economic centers, and left communities with limited transportation and mobility options.

"This Challenge asks communities to reimagine how they can be better connected, and empowers them to design innovative transportation projects that serve everyone that lives there," said Secretary Foxx. "We are excited to work with thought leaders who share our focus on designing a 21<sup>st</sup> century transportation network that is built by, for and with the communities impacted by them."

Applicants must register their interest in participating by May 20, 2016. Final applications must be submitted to USDOT by June 3, 2016 at 5:00pm Eastern Time.

To qualify, applicants must assemble a "community team" of elected officials, transportation professionals, and a cross-section of community residents, as well as provide a descriptive narrative of a transportation infrastructure challenge that limits access to social or economic centers and other essential services, and finally, explain their goals for entering the *Every Place Counts* Design Challenge. Applicants must also submit Letters of Support from entities and jurisdictions that are currently impacted by the infrastructure challenge; this can include letters of support from the State Department of Transportation, community groups, transit agencies, port authorities, MPOs, or other political subdivisions of State or local governments.

USDOT will select four finalists who will receive a two-day 'community vision' design session in their city in July 2016. USDOT intends for design sessions to enable finalists to better engage in federal transportation planning, programming and funding programs.

Secretary Foxx will host a <u>national virtual town hall</u> on May 11, 2016 to discuss the integral role that transportation plays in connecting people to opportunity. During the Town Hall conversation Secretary Foxx



About Resources

# Every Place Counts Design Challenge

# Challenge Webinar

View the presentation slides from our May 18 webinar.



As a result of the Interstate Highway program that began in the 1950s, the U.S. had a well-developed network of routes —air, rail, and road— that linked every state and connected the country as never before. However, we see today that the infrastructure that brought massive expansion also divided neighborhoods. Residents were often cut off from newly formed social and economic centers and left with limited mobility and transportation options.

The Ladders of Opportunity **EVERY PLACE COUNTS DESIGN CHALLENGE** seeks to raise awareness about bifurcated neighborhoods, identify innovative practices to reconnect communities, and inform the transportation life cycle.

Community Teams led by local and tribal government officials will compete to receive on-site technical assistance in a 2-day design session with DOT and experts in the field.

## Official Challenge Notice

Download the challenge notice with complete application information from <a href="https://www.transportation.gov/opportunity/challenge/notice">www.transportation.gov/opportunity/challenge/notice</a>.

## Challenge Goals

- Encourage communities to reimagine existing transportation projects via innovative and restorative infrastructure design that corrects past mistakes; reconnects people and neighborhoods to opportunity; and reinvigorates opportunity within communities.
- Empower communities and decision-makers to work together to develop context-sensitive design solutions that reflect and incorporate

# Challenge Information

The Every Place Counts Design Challenge will provide technical assistance to local, territorial, and tribal governments through a "community vision" design session that seeks to improve access to reliable, safe, and affordable transportation for disconnected communities in urban, suburban, and rural areas. The challenge seeks to raise awareness about bifurcated neighborhoods, identify innovative practices to reconnect communities, and inform the transportation project life cycle.

DOT is accepting applications from local and tribal governments seeking assistance with a problem that demonstrates how the community has been disconnected by existing transportation infrastructure and seeking to restore the connectivity of the community to jobs, healthcare, schools, grocery stores, and other essential services. DOT will work with four finalists to host a 2-day design session in their community.

DOT also invites regional and national urban designers, architects, and planners to participate as technical experts in each Finalist's design session.

- The Challenge will consider existing transportation projects that are nearing the end of their useful life and/or that offer an opportunity to reconnect communities.
- One community from each region —North, South, Mid-America, and West— will be selected.
- A design session will be held for each finalist on either July 6-7, July 11-12, July 14-15, or July 18-19.
- National and regional practitioners are encouraged to offer their knowledge and expertise in any of the four design sessions.

## **Key Dates**

 Informational Webinar, May 18, 2016, 3-4pm (EDT); register at https://www.surveymonkey.com/r/NDGL5X6

- Applicants must register by May 20, 2016 before submitting an application.
- Applications are due by June 3, 2016 at 5:00pm ET.

#### **Review and Selection Process**

A multimodal review panel, chaired by the Chief Opportunities Officer will assess the submitted applications and make recommendations to the Secretary of Transportation for final selection.

Updated: Friday, May 20, 2016

Subscribe to Updates



Frequently Asked Questions

View answers to some common questions

Register Here

Register for the Every Place Counts Design Challenge

Register to be a Challenge Volunteer

Related Documents

- Every Place Counts Design Challenge Fact Sheet (PDF)
- Every Place Counts Design Challenge Notice

Contact Us

#### **Reconnect Communities**

1200 New Jersey Ave, SE Washington, DC 20590 United States ReconnectCommunities@dot.gov

Business Hours: 9:00am-5:00pm ET, M-F

Tags

ladders of opportunity

Share

Submit Feedback >



# DEMEC

# **Delaware Municipal Electric Corporation**

22 Artisan Drive, PO Box 310, Smyrna, Delaware 19977 Phone 302 653-2733 Fax 302 653-2734

May 25, 2016

TO: DEMEC Board of Directors

FROM: Patrick E. McCullar, President

SUBJ: Results of 2019/20 Capacity Auction

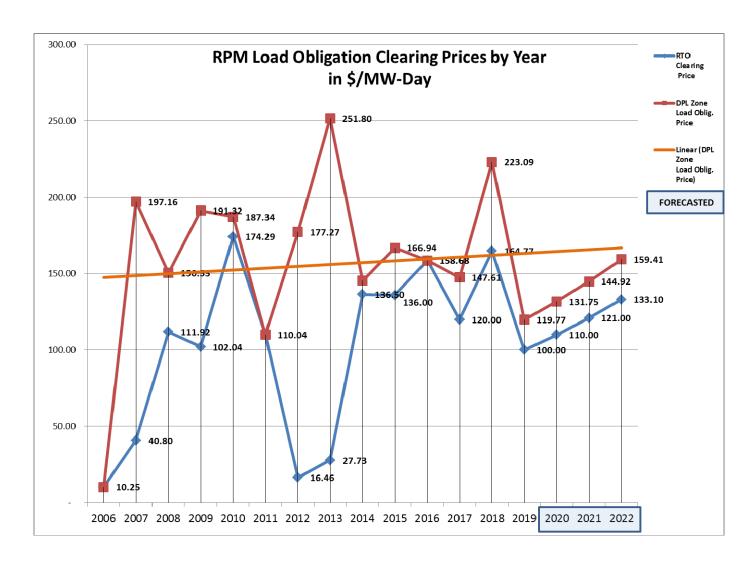
The results of the 2016 PJM Base Residual Auction ("BRA") for Capacity in delivery year 2019/20 were released by PJM at the end of business yesterday. The auction delivered a surprise, as always. However, this is a happy surprise for LSEs, but a big disappointment for generation owners. The prices for both Capacity Performance ("CP") and Base Capacity, as shown in the table below, cleared much lower than the prior year. The PJM report is attached.

The following table shows the reduction in clearing prices in this 2016 BRA as compared to the 2015 BRA (all values \$ MW-day):

| LDA/Zone           | CP 2016  | CP 2015  | Reduction from 2015 | Base 2016 | Base 2015 | Reduction in 2015 |
|--------------------|----------|----------|---------------------|-----------|-----------|-------------------|
| RTO                | \$100.00 | \$164.77 | \$64.77             | \$80.00   | \$144.77  | \$64.77           |
| MAAC               | \$100.00 | \$164.77 | \$64.77             | \$80.00   | \$144.77  | \$64.77           |
| EMAAC              | \$119.77 | \$225.42 | \$105.65            | \$99.77   | \$205.42  | \$105.65          |
| SWMAAC             | \$100.00 | \$164.77 | \$64.77             | \$80.00   | \$144.77  | \$64.77           |
| PS                 | \$119.77 | \$225.42 | \$105.65            | \$99.77   | \$205.42  | \$105.65          |
| PSNORTH            | \$119.77 | \$225.42 | \$105.65            | \$99.77   | \$205.42  | \$105.65          |
| DPLSOUTH           | \$119.77 | \$225.42 | \$105.65            | \$99.77   | \$205.42  | \$105.65          |
| PEPCO              | \$100.00 | \$164.77 | \$64.77             | \$80.00   | \$144.77  | \$64.77           |
| ATSI               | \$100.00 | \$164.77 | \$64.77             | \$80.00   | \$144.77  | \$64.77           |
| ATSI-<br>CLEVELAND | \$100.00 | \$164.77 | \$64.77             | \$80.00   | \$144.77  | \$64.77           |
| COMED              | \$202.77 | \$215.00 | \$12.23             | \$182.77  | \$195.00  | \$12.23           |
| BGE                | \$100.30 | \$164.77 | \$64.47             | \$80.30   | \$144.77  | \$64.47           |
| PL                 | \$100.00 | \$164.77 | \$64.77             | \$80.00   | \$144.77  | \$64.77           |

DEMEC member capacity obligation is priced at DPL Zone, which is a part of the EMAAC region of PJM. While DPL did not bind, all of EMMAC was a binding constraint area for this auction, as it was for the two prior years. The 2016 auction clearing price for EMAAC of \$119.77 is a 47% reduction from the 2015 clearing price of \$225.42. Certainly not what we expected given the implementation of

the strict Capacity Performance rules in 2014. We were projecting a 10% increase in clearing prices for 2016 versus 2015. While this is very favorable, the PJM capacity auctions over the years have proved to be volatile and unpredictable, and this year a probably an anomaly. Below is a graphic of clearing prices since the beginning of the PJM RPM capacity auction construct:



Looking at the results from our generation-owner aspect, 2019/2020 capacity revenue from our generation resources will be 47% lower than 2018/2019. This lower revenue will be more than offset by our lower LSE capacity obligation cost, since our generation assets only provide 87% of our LSE peak load obligation.

The reasons for the lower than average clearing prices appear to be a lower PJM load forecast than prior year, significant new generation bidding in, less retirements than previously announced (formal retirement filings withdrawn by generation owners), and significant demand response bidding in, albeit at a lower level than prior years due to the CP requirements. Unfortunately, we believe this will go down as an anomaly year. Next year requires 100% CP with Base Capacity not allowed. This will probably change bidding behavior and squeeze out a significant amount of Demand Response. Early projections indicate 2017 clearing prices will take a significant jump northward as generation owners

| price in the cost of plant investments to increase availability and the perceived cost of CP non-performance penalties. As always, we will budget conservatively and maintain a hedge to our exposure to long term capacity obligation cost increases and ever-increasing transmission costs. |
|---|
| attachment  |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |



## **Executive Summary**

The 2019/2020 Reliability Pricing Model (RPM) Base Residual Auction (BRA) cleared 167,305.9 MW of unforced capacity in the RTO. Accounting for load and resource commitments under the Fixed Resource Requirement (FRR), the reserve margin for the entire RTO for the 2019/2020 Delivery Year as procured in the BRA is 22.4%, or 5.9% higher than the target reserve margin of 16.5%. This reserve margin was achieved at Capacity Performance prices that are between approximately 33% to 60% of Net CONE, depending upon the zone comparison, while attracting just over 5,000 MW of new combined cycle gas resources.

The 2019/2020 RPM BRA was the second BRA to include the Capacity Performance ("CP") provisions approved by FERC prior to last year's 2018/2019 BRA. As part of the transition to 100% CP starting with next year's 2020/2021 BRA, PJM procured two capacity product types through the auction, Capacity Performance and Base Capacity. CP Resources must be capable of sustained, predictable operation, and are expected to be available and capable of providing energy and reserves when needed throughout the entire Delivery Year; whereas, Base Capacity Resources may not be capable of sustained, predictable operation and/or may not be expected to provide energy and reserves outside of the summer period. Base Capacity Resources include Base Capacity Demand Resources (DR), which are expected to be available only during the summer months, and Base Capacity Energy Efficiency (EE) Resources, which are expected to provide permanent continuous load reduction only during the summer months. Base Capacity Resources also include Base Capacity Generation Resources, which are expected to be available throughout the Delivery Year like all Capacity Performance Resources. But, unlike Capacity Performance Resources, Base Capacity Generation Resources will be subject to non-performance charges only when they fail to perform when needed during the summer months.

Base Capacity Resources do not provide the same level of availability or reliability as CP Resources, therefore constraints are imposed on the quantity of Base Capacity Resources that can be procured in each RPM auction. A Base Capacity DR Constraint which places a maximum limit on the total quantity of Base Capacity DR and Base Capacity EE that can be procured in the auction is established for the entire RTO and each modeled LDA. A Base Capacity Resource Constraint which places a maximum limit on the total quantity of Base Capacity DR, Base Capacity EE and Base Capacity Generation Resources that can be procured in the auction is established for the entire RTO and each modeled LDA. If these constraints are reached in the auction then these less-available resources will clear the auction at a lower clearing price then the clearing price associated with similarly located more-available resources.

## 2019/2020 BRA Resource Clearing Prices

Resource Clearing Prices (RCPs) for the 2019/2020 BRA are shown in Table 1 below. The RCP for CP Resources located in the rest of RTO is \$100.00/MW-day. The EMAAC LDA, ComEd LDA and BGE LDA were constrained LDAs in the 2019/2020 BRA with locational price adders of \$19.77/MW-day, \$102.77/MW-day and \$0.30/MW-day, respectively, for all resources located in those LDAs. The RCP for CP Resources in the EMAAC LDA is \$119.77/MW-day, the RCP for CP Resources in the COMED LDA is \$202.77 /MW-day, and the RCP for CP Resources located in the BGE LDA is \$100.30/MW-day. For comparison purposes, the RCP



for CP Resources located in the rest of RTO in the 2018/2019 BRA was \$164.77/MW-day. The RCP for CP Resources in the EMAAC LDA was \$225.42/MW-day and the RCP for CP Resources in the COMED LDA was \$215.00 /MW-day in the 2018/2019 BRA. The BGE LDA cleared with the rest of RTO with a RCP for CP Resources of \$164.77/MW-day in the 2018/2019 BRA.

|                      | 2019/20 BRA Resource Clearing Prices (\$/MW-day) |          |          |          |          |  |  |  |  |
|----------------------|--|----------|----------|----------|----------|--|--|--|--|
| Capacity Type        | Rest of RTO                                      | EMAAC    | PEPCO    | COMED    | BGE      |  |  |  |  |
| Capacity Performance | \$100.00   | \$119.77 | \$100.00 | \$202.77 | \$100.30 |  |  |  |  |
| Base Generation      | \$80.00  | \$99.77  | \$80.00  | \$182.77 | \$80.30  |  |  |  |  |
| Base DR/EE           | \$80.00  | \$99.77  | \$0.01   | \$182.77 | \$80.30  |  |  |  |  |

The Base Capacity Resource Constraint is a binding constraint in the auction for the overall RTO resulting in a price decrement for Base Capacity Generation of \$20.00/MW-day relative to the RCP of similarly located CP resources. Additionally, the Base Capacity DR Constraint is a binding constraint in the PEPCO LDA resulting in price decrements for Base Capacity DR and EE located in the PEPCO LDA of \$79.99/MW-day. The price decrement for Base Capacity DR and EE is relative to the RCP of Base Capacity Generation Resources located in the PEPCO LDA.

The RCP for Base Capacity Resources located in the rest of RTO outside of the EMAAC, COMED and BGE LDAs is \$80.00/MW-day. The RCP for Base Capacity Resources located in the EMAAC LDA is \$99.77/MW-day, the RCP for Base Capacity Resources located in the ComEd LDA is \$182.77/MW-day, and the RCP for Base Capacity Resources located in the BGE LDA is \$80.30/MW-day. The RCP for Base Capacity DR & EE Resources located in the PEPCO LDA is \$0.01/MW-day. The Base DR/EE RCP in PEPCO is a function of the quantity of supply that effectively offered as price takers relative to the Base DR/EE constraint of 474.5 MW.

## 2019/2020 BRA Cleared Capacity Resources

As seen in the table below, the 2019/2020 BRA procured 5,373.6 MW of capacity from new generation and 155.6 MW from uprates to existing or planned generation. The quantity of capacity procured from external Generation Capacity Resources in the 2019/2020 BRA is 3,875.9 MW which is a decrease of 812 MW from that procured in last year's BRA. Of the 3,875.9 MW procured from external Generation Capacity Resources in the 2019/2020 BRA, 2,744.7 MW cleared as Capacity Performance product type and 1,131.2 MW cleared as Base product type. All external generation capacity that has cleared in the 2019/20 BRA has met the requirements for the Capacity Import Limit (CIL) exception. The total quantity of DR procured in the 2019/2020 BRA is 10,348 MW which is a decrease of 736.4 MW from that procured in last year's BRA; and, the total quantity of EE procured in the 2019/2020 BRA



is 1,515.1 MW, which is an increase of 268.6 MW from that procured in last year's BRA. Of the 10,348 MW procured from DR Resources in the 2019/2020 BRA, 613.7 MW cleared as Capacity Performance product type and 9,734.3 MW cleared as Base product type. Of the 1,515.1 MW procured from EE Resources in the 2019/2020 BRA, 1,058.1 MW cleared as Capacity Performance product type and 457 MW cleared as Base product type.

## Megawatts of Unforced Capacity Procured by Type from the 2014/2015 BRA to the 2019/2020 BRA

| BRA Delivery Year | New Generation | Generation Uprates | Imports | Demand Response | Energy Efficiency |
|-------------------|----------------|--------------------|---------|-----------------|-------------------|
| 2019/2020         | 5,373.6        | 155.6              | 3,875.9 | 10,348.0        | 1,515.1           |
| 2018/2019         | 2,954.3        | 587.6              | 4,687.9 | 11,084.4        | 1,246.5           |
| 2017/2018         | 5,927.4        | 339.9              | 4,525.5 | 10,974.8        | 1,338.9           |
| 2016/2017         | 4,281.6        | 1,181.3            | 7,482.7 | 12,408.1        | 1,117.3           |
| 2015/2016         | 4,898.9        | 447.4              | 3,935.3 | 14,832.8        | 922.5             |
| 2014/2015         | 415.5          | 341.1              | 3,016.5 | 14,118.4        | 822.1             |



## **Introduction**

This document provides information for PJM stakeholders regarding the results of the 2019/2020 Reliability Pricing Model (RPM) Base Residual Auction (BRA). The 2019/2020 BRA opened on May 11, 2016, and the results were posted on May 24, 2016.

In each BRA, PJM seeks to procure a target capacity reserve level for the RTO in a least cost manner while recognizing the following reliability-based constraints on the location and type of capacity that can be committed:

- Internal PJM locational constraints are established by setting up Locational Deliverability Areas (LDAs) with each LDA having a separate target capacity reserve level and a maximum limit on the amount of capacity that it can import from resources located outside of the LDA.
- Constraints on the procurement of the more limited capacity product types are established for the RTO and each modeled LDA. The Base Capacity DR Constraint limits the quantity of Base Capacity DR and EE that can be procured in each LDA or in total across the entire RTO; and the Base Capacity Resource Constraint limits the quantity of the sum of Base Capacity DR and EE and Base Capacity Generation Resources that can be procured in each LDA or in total across the entire RTO.
- Capacity Import Limits (CILs) are established on the amount of external generation capacity that can be reliably committed to PJM. A separate CIL is established for each of five external source-zones and a single total CIL is established for the overall RTO. As described in more detail later in this report, external generation resources may seek exception to the CIL by meeting all three of the following conditions prior to the start of the auction: (1) they are committed to being pseudo-tied generation resources prior to the start of the Delivery Year; that is, they will be treated like internal generation, subject to redispatch and locational pricing; (2) they have long-term firm transmission service confirmed on the complete transmission path from such resource into PJM; and (3) they agree to be subject to the same capacity must-offer requirement as PJM's internal resources.

The auction clearing process commits capacity resources to procure a target capacity reserve level for the RTO in a least-cost manner while recognizing and enforcing these reliability-based constraints. The clearing solution may be required to commit capacity resource out-of-merit order but again in a least-cost manner to ensure that all of these constraints are respected. In those cases where one or more of the constraints results in out-of-merit commitment in the auction solution, resource clearing prices will be reflective of the price of resources selected out of merit order to meet the necessary requirements.

This document begins with a high-level summary of the BRA results followed by sections containing detailed descriptions of the 2019/2020 BRA results and a discussion of the results in the context of the ten previous BRAs.



## **Summary of Results**

The 2019/2020 Reliability Pricing Model (RPM) Base Residual Auction (BRA) cleared 167,305.9 MW of unforced capacity in the RTO representing a 22.9% reserve margin. The reserve margin for the entire RTO is 22.4%, or 5.9% higher than the target reserve margin of 16.5%, when the Fixed Resource Requirement (FRR) load and resources are considered.

Resource Clearing Prices (RCPs) for the 2019/2020 BRA are shown in Table 4. The RCP for CP Resources located in the rest of RTO is \$100.00/MW-day. The EMAAC LDA, ComEd LDA and BGE LDA were constrained LDAs in the 2019/2020 BRA. The RCP for CP Resources in the EMAAC LDA is \$119.77/MW-day, the RCP for CP Resources in the COMED LDA is \$202.77 /MW-day, and the RCP for CP Resources located in the BGE LDA is \$100.30/MW-day. For comparison purposes, the RCP for CP Resources located in the rest of RTO in the 2018/2019 BRA was \$164.77/MW-day. The RCP for CP Resources in the EMAAC LDA was \$225.42/MW-day and the RCP for CP Resources in the COMED LDA was \$215.00 /MW-day in the 2018/2019 BRA. The BGE LDA cleared with the rest of RTO with a RCP for CP Resources of \$164.77/MW-day in the 2018/2019 BRA.

The Base Capacity Resource Constraint is a binding constraint in the auction for the overall RTO resulting in a price decrement for Base Capacity Generation of \$20.00/MW-day relative to the RCP of similarly located CP resources. Additionally, the Base Capacity DR Constraint is a binding constraint in the PEPCO LDA resulting in a price decrement for Base Capacity DR and EE of \$79.99/MW-day relative to RCP of Base Capacity Generation Resources located in the PEPCO LDA.

The RCP for Base Capacity Resources located in the rest of RTO is \$80.00/MW-day. The RCP for Base Capacity Resources located in the EMAAC LDA is \$99.77/MW-day, the RCP for Base Capacity Resources located in the ComEd LDA is \$182.77/MW-day, and the RCP for Base Capacity Resources located in the BGE LDA is \$80.30/MW-day. The RCP for Base Capacity DR & EE Resources located in the PEPCO LDA is \$0.01/MW-day.

The total quantity of new Generation Capacity Resources offered into the auction was 6,543.5 MW (UCAP) comprised of 6,330.1 MW of new generation units and 213.4 MW of uprates to existing generation units. The quantity of new Generation Capacity Resources cleared was 5,529.2 MW (UCAP) comprised of 5,373.6 MW (UCAP) from new generation units and 155.6 MW from uprates to existing generation units.

The quantity of capacity procured from external Generation Capacity Resources in the 2019/2020 BRA is 3,875.9 MW which is a decrease of 812 MW from that procured in last year's BRA. All external generation capacity that has cleared in the 2019/2020 BRA has met the requirements for CIL exception. These requirements help to ensure that external resources offering into the RPM auction



have reasonable expectation of physically delivering on any RPM commitment and have high likelihood of being available for PJM when needed.

The total quantity of DR procured in the 2019/2020 BRA is 10,348 MW which is a decrease of 736.4 MW from that procured in last year's BRA; and, the total quantity of EE procured in the 2019/2020 BRA is 1,515.1 MW which is an increase of 268.6 MW from that procured in last year's BRA.

The RTO as a whole failed the Market Structure Test (i.e., the Three-Pivotal Supplier Test), resulting in the application of market power mitigation to all existing generation resources. Mitigation was applied to a supplier's existing generation resources resulting in utilizing the lesser of the supplier's approved Market Seller Offer Cap for such resource or the supplier's submitted offer price for such resource in the RPM Auction clearing.

All Generation Capacity Resources (including uprates to existing resources) of 20 MW or greater that are based on combustion turbine, combined cycle and integrated gasification combined cycle technologies that have not cleared an RPM Auction prior to February 1, 2013 are subject to the Minimum Offer Price Rule (MOPR). External Generation Capacity Resources meeting the above criteria and that have entered commercial operation on or after January 1, 2013 and that require sufficient transmission investment for delivery into PJM are also subject to MOPR. To avoid application of the MOPR, Capacity Market Sellers may request exemption through either a Competitive Entry Exemption request or a Self-Supply Exemption request. The table below shows the requested, granted and cleared aggregate quantity (in ICAP MW) of each exemption type received and processed by PJM. While there were nearly 13,000 MW of MOPR exemption requests, making a request does not obligate a resource to offer into the BRA.



| LDA   | Exemption Type    | Requested Quantity<br>(ICAP MW) | Granted Quantity<br>(ICAP MW) | Cleared Quantity<br>(ICAP MW) |
|-------|-------------------|---------------------------------|-------------------------------|-------------------------------|
| RTO*  | Competitive Entry | 5,401.0                         | 5,401.0                       | 1,933.0                       |
| RTO*  | Self-Supply       | 1,827.2                         | 1,827.2                       | 1,779.5                       |
| MAAC  | Competitive Entry | 5,764.0                         | 5,764.0                       | 1,870.9                       |
| MAAC  | Self-Supply       | 0.0                             | 0.0                           | 0.0                           |
| Total |                   | 12,992.2                        | 12,992.2                      | 5,583.4                       |

<sup>\*</sup>RTO values exclude MAAC

A further discussion of the 2019/2020 BRA results and additional information regarding the 2019/2020 RPM BRA are detailed in the body of this report. The discussion also provides a comparison of the 2019/2020 auction results to the results from the 2007/2008 through 2018/2019 RPM Auctions.



## 2019/2020 Base Residual Auction Results Discussion

Table 1 contains a summary of the RTO clearing prices, cleared unforced capacity, and implied cleared reserve margins resulting from the 2019/2020 RPM BRA in comparison to those from 2007/2008 through 2018/2019 RPM BRAs.

Table 1 - RPM Base Residual Auction Resource Clearing Price Results in the RTO

|                         | RTO       |           |           |           |                        |           |                        |                        |            |                        |           |           |           |
|-------------------------|-----------|-----------|-----------|-----------|------------------------|-----------|------------------------|------------------------|------------|------------------------|-----------|-----------|-----------|
| Auction Results         | 2007/2008 | 2008/2009 | 2009/2010 | 2010/2011 | 2011/2012 <sup>1</sup> | 2012/2013 | 2013/2014 <sup>2</sup> | 2014/2015 <sup>3</sup> | 2015/20164 | 2016/2017 <sup>5</sup> | 2017/2018 | 2018/2019 | 2019/2020 |
| Resource Clearing Price | \$40.80   | \$111.92  | \$102.04  | \$174.29  | \$110.00               | \$16.46   | \$27.73                | \$125.99               | \$136.00   | \$59.37                | \$120.00  | \$164.77  | \$100.00  |
| Cleared UCAP (MW)       | 129,409.2 | 129,597.6 | 132,231.8 | 132,190.4 | 132,221.5              | 136,143.5 | 152,743.3              | 149,974.7              | 164,561.2  | 169,159.7              | 167,003.7 | 166,836.9 | 167,305.9 |
| Reserve Margin          | 19.1%     | 17.4%     | 17.6%     | 16.4%     | 17.9%                  | 20.5%     | 19.7%                  | 18.8%                  | 19.3%      | 20.3%                  | 19.7%     | 19.8%     | 22.4%     |

<sup>1) 2011/2012</sup> BRA was conducted without Duquesne zone load.

The Reserve Margin presented in Table 1 represents the percentage of installed capacity cleared in RPM and committed by FRR entities in excess of the RTO load (including load served under the Fixed Resource Requirement alternative). The 2019/2020 RPM BRA cleared 167,305.9 MW of unforced capacity in the RTO representing a 22.9% reserve margin. The reserve margin for the entire RTO is 22.4%, or 5.9% higher than the target reserve margin of 16.5%, when the Fixed Resource Requirement (FRR) load and resources are considered. Moreover, the cleared reserve margin is nearly 2 percent higher than the previous highs observed in the 2012/2013 and 2016/2017 BRAs.

## **New Generation Resource Participation**

The 2019/2020 BRA results reflect a continuation of strong participation by new Generation Capacity Resources mostly in the form of new (or uprates to existing) gas-fired combustion turbine and combined cycle generation units. The total quantity of new Generation Capacity Resources offered into the auction was 6,543.5 MW (UCAP) comprised of 6,330.1 MW of new generation units and 213.4 MW of uprates to existing generation units. The quantity of new Generation Capacity Resources cleared was 5,529.2 MW (UCAP) comprised of 5,376.6 MW (UCAP) from new generation units, predominantly natural gas combined cycle and combustion turbines, and 155.6 MW from uprates to existing generation units.

Over the last several years, new generation cleared in RPM auctions has been very successful in meeting its committed in-service dates. For example, in the 2015/2016 Delivery Year, of the 4,575 MW of large, combined cycle units that cleared in RPM, all but 661

<sup>2) 2013/2014</sup> BRA includes ATSI zone

<sup>3) 2014/2015</sup> BRA includes Duke zone

<sup>4) 2015/2016</sup> BRA includes a significant portion of AEP and DEOK zone load previously under the FRR Alternative

<sup>5) 2016/2017</sup> BRA includes EKPC zone



MW are in-service, and the remainder is expected to be in service by mid-2017. For the upcoming 2016/2017 Delivery Year, all 4,091 MW of new, large, combined cycle generation that cleared in RPM is or will be fully in-service by June 1st. For the 2017/2018 Delivery Year, 3,132 MW of the 4,825 MW of new, large, combined cycle units are on schedule to be fully in service before the Delivery Year. In summary, over 80% of the new, large, combined cycle units that cleared in the RPM auctions for these three Delivery Years are either already in service or on schedule to be in service prior to the Delivery Year for which they initially committed.

Table 2A shows the breakdown, by major LDA, of capacity in UCAP terms of new units and uprates at existing units offered in the auction and capacity actually clearing in the auction. Eighty-four percent of the new generation capacity that offered into the 2019/2020BRA cleared the auction.

Table 2A – Offered and Cleared New Generation Capacity by LDA (in UCAP MW)

|           |        | Offered  |         |        | Cleared  |         |
|-----------|--------|----------|---------|--------|----------|---------|
| LDA       | Uprate | New Unit | Total   | Uprate | New Unit | Total   |
| EMAAC     | 54.8   | 35.6     | 90.4    | 13.5   | 35.6     | 49.1    |
| MAAC      | 63.8   | 2,274.5  | 2,338.3 | 22.5   | 1,843.3  | 1,865.8 |
| Total RTO | 213.4  | 6,330.1  | 6,543.5 | 155.6  | 5,373.6  | 5,529.2 |

<sup>\*</sup>All MW Values are in UCAP Terms

<sup>\*</sup>MAAC includes EMAAC

<sup>\*\*</sup>RTO includes MAAC



## **Capacity Import Participation**

The quantity of capacity imports cleared in the 2019/2020 BRA were 3,875.9 MW (UCAP) which represents a decrease of 812 MW from the imports that cleared in the 2018/2019 BRA. Of the 3,875.9 MW procured from external Generation Capacity Resources in the 2019/2020 BRA, 2,744.7 MW cleared as Capacity Performance product type and 1,131.2 MW cleared as Base product type. The majority of the imports are from resources located in regions west of the PJM RTO. All external generation capacity that has cleared in the 2019/20 BRA has met the requirements for the CIL exception.

Table 2B – Offered and Cleared Capacity Imports (in UCAP MW)

|                                     |        | External Source Zones |         |         |         |         |  |  |  |
|-------------------------------------|--------|-----------------------|---------|---------|---------|---------|--|--|--|
|                                     | NORTH  | WEST 1                | WEST 2  | SOUTH 1 | SOUTH 2 | Total   |  |  |  |
| Offered MW (UCAP)                   | 252.0  | 2,199.2               | 1,105.6 | 371.0   | 415.6   | 4,343.4 |  |  |  |
| Cleared MW (UCAP)                   | 252.0  | 2,132.9               | 866.9   | 371.0   | 253.1   | 3,875.9 |  |  |  |
| Resource Clearing Price (\$/MW-day) | \$0.00 | \$0.00                | \$0.00  | \$0.00  | \$0.00  |         |  |  |  |

Note: Cleared MW quantities include resources that received CIL Exception and those associated with pre-OATT grandfathered transmission

## **Demand Resource Participation**

The total quantity of DR offered into the 2019/2020 BRA was 11,818 MW (UCAP), representing an increase of 1.2% over the DR that offered into the 2018/2019 BRA. Of the 11,818 MW of total DR that offered in this auction, 10,348 MW cleared. The cleared DR is 736.4 MW less than that which cleared in the 2018/2019 BRA. Of the 10,348 MW procured from DR Resources in the 2019/2020 BRA, 613.7 MW cleared as Capacity Performance product type and 9,734.3 MW cleared as Base product type. Table 3A contains a comparison of the DR Offered and Cleared in 2018/2019 BRA & 2019/2020 BRA represented in UCAP.

## **Energy Efficiency Resource Participation**

An EE resource is a project that involves the installation of more efficient devices/equipment or the implementation of more efficient processes/systems exceeding then-current building codes, appliance standards, or other relevant standards at the time of installation as known at the time of commitment. The EE resource must achieve a permanent, continuous reduction in electric energy consumption (during the defined EE performance hours) that is not reflected in the peak load forecast used for the BRA for the Delivery Year for which the EE resource is proposed. The EE resource must be fully implemented at all times during the Delivery Year, without any



requirement of notice, dispatch, or operator intervention. Of the 1,650.3 MW of energy efficiency that offered into the 2019/2020 BRA, 1,515.1 MW of EE resources cleared in the auction. Of the 1,515.1 MW procured from EE Resources in the 2019/2020 BRA, 1,058.1 MW cleared as Capacity Performance product type and 457 MW cleared as Base product type.

Table 3B contains a summary of the DR and EE resources that offered and cleared by zone in the 2019/2020 BRA. Approximately 87.6% of the demand resources and 91.8% of the energy efficiency resources that were offered into the BRA cleared. The uncleared resources were offered at a price above the applicable clearing price for the LDA in which the resource was offered.

Figure 1 illustrates the demand side participation in the PJM Capacity Market from 2005/2006 Delivery Year to the 2019/2020 Delivery Year. Demand side participation includes active load management (ALM) prior to 2007/2008 Delivery Year, Interruptible Load for Reliability (ILR) and DR offered into each BRA and nominated in FRR Plans, and EE resources starting with the 2012/2013 Delivery Year. The demand side participation in the capacity market has increased dramatically since the inception of RPM in the 2007/2008 Delivery Year through the 2015/2016 BRA, but as shown in Figure 1, total demand side participation and cleared resources for the 2019/2020 BRA have fallen below the levels seen in the 2014/2015 BRA.



 $Table\ 3A-Comparison\ of\ Demand\ Resources\ Offered\ and\ Cleared\ in\ 2018/2019\ BRA\ \&\ 2019/2020\ BRA\ represented\ in\ UCAP$ 

|                    |         | Offered MW (UCAP) |           |                           | CI        | eared MW (l | JCAP)                     |
|--------------------|---------|-------------------|-----------|---------------------------|-----------|-------------|---------------------------|
| LDA                | Zone    | 2018/2019         | 2019/2020 | Increase in<br>Offered MW | 2018/2019 | 2019/2020   | Increase in<br>Cleared MW |
| EMAAC              | AECO    | 165.1             | 153.8     | (11.3)                    | 162.1     | 145.7       | (16.4)                    |
| EMAAC/DPL-S        | DPL     | 422.7             | 397.9     | (24.8)                    | 418.2     | 371.6       | (46.6)                    |
| EMAAC              | JCPL    | 206.4             | 231.2     | 24.8                      | 200.1     | 200.8       | 0.7                       |
| EMAAC              | PECO    | 513.0             | 565.1     | 52.1                      | 504.5     | 527.4       | 22.9                      |
| PSEG/PS-N          | PSEG    | 386.6             | 427.8     | 41.2                      | 382.2     | 380.7       | (1.5)                     |
| EMAAC              | RECO    | 7.6               | 10.3      | 2.7                       | 7.5       | 10.3        | 2.8                       |
| EMAAC Sub To       | otal    | 1,701.4           | 1,786.1   | 84.7                      | 1,674.6   | 1,636.5     | (38.1)                    |
| PEPCO              | PEPCO   | 667.1             | 570.4     | (96.7)                    | 523.1     | 483.3       | (39.8)                    |
| BGE                | BGE     | 813.9             | 729.3     | (84.6)                    | 660.0     | 256.4       | (403.6)                   |
| MAAC               | METED   | 334.9             | 379.8     | 44.9                      | 327.4     | 321.7       | (5.7)                     |
| MAAC               | PENELEC | 392.6             | 392.0     | (0.6)                     | 384.7     | 339.4       | (45.3)                    |
| PPL                | PPL     | 873.6             | 815.6     | (58.0)                    | 716.2     | 739.8       | 23.6                      |
| MAAC** Sub To      | otal    | 4,783.5           | 4,673.2   | (110.3)                   | 4,286.0   | 3,777.1     | (508.9)                   |
| RTO                | AEP     | 1,441.5           | 1,603.1   | 161.6                     | 1,417.6   | 1,416.1     | (1.5)                     |
| RTO                | APS     | 990.7             | 1,039.4   | 48.7                      | 976.8     | 926.0       | (50.8)                    |
| ATSI/ATSI-C        | ATSI    | 891.9             | 978.0     | 86.1                      | 877.0     | 897.6       | 20.6                      |
| COMED              | COMED   | 1,901.2           | 1,792.0   | (109.2)                   | 1,876.7   | 1,757.4     | (119.3)                   |
| RTO                | DAY     | 234.9             | 237.6     | 2.7                       | 231.6     | 219.8       | (11.8)                    |
| RTO                | DEOK    | 205.7             | 248.8     | 43.1                      | 203.8     | 236.7       | 32.9                      |
| RTO                | DOM     | 827.8             | 816.8     | (11.0)                    | 817.3     | 729.7       | (87.6)                    |
| RTO                | DUQ     | 263.0             | 286.8     | 23.8                      | 262.3     | 247.2       | (15.1)                    |
| RTO                | EKPC    | 135.3             | 142.3     | 7.0                       | 135.3     | 140.4       | 5.1                       |
| <b>Grand Total</b> |         | 11,675.5          | 11,818.0  | 142.5                     | 11,084.4  | 10,348.0    | (736.4)                   |

<sup>\*\*</sup>MAAC sub-total includes all MAAC Zones



Table 3B - Comparison of Demand Resources and Energy Efficiency Resources Offered versus Cleared in the 2018/2019 BRA

|                    |         | Offered MW (UCAP) |         |          | Cleared MW (UCAP) |         |          |
|--------------------|---------|-------------------|---------|----------|-------------------|---------|----------|
| LDA                | Zone    | DR                | Œ       | Total    | DR                | Œ       | Total    |
| EMAAC              | AECO    | 153.8             | 18.6    | 172.4    | 145.7             | 14.1    | 159.8    |
| EMAAC/DPL-S        | DPL     | 397.9             | 25.7    | 423.6    | 371.6             | 22.4    | 394.0    |
| EMAAC              | JCPL    | 231.2             | 26.1    | 257.3    | 200.8             | 21.2    | 222.0    |
| EMAAC              | PECO    | 565.1             | 50.2    | 615.3    | 527.4             | 41.1    | 568.5    |
| PSEG/PS-N          | PSEG    | 427.8             | 59.6    | 487.4    | 380.7             | 49.3    | 430.0    |
| EMAAC              | RECO    | 10.3              | 25.3    | 35.6     | 10.3              | 12.7    | 23.0     |
| EMAAC Sub Total    |         | 1,786.1           | 205.5   | 1,991.6  | 1,636.5           | 160.8   | 1,797.3  |
| PEPCO              | PEPCO   | 570.4             | 85.2    | 655.6    | 483.3             | 79.0    | 562.3    |
| BGE                | BGE     | 729.3             | 100.7   | 830.0    | 256.4             | 100.7   | 357.1    |
| MAAC               | METED   | 379.8             | 20.7    | 400.5    | 321.7             | 18.2    | 339.9    |
| MAAC               | PENELEC | 392.0             | 26.1    | 418.1    | 339.4             | 17.3    | 356.7    |
| PPL                | PPL     | 815.6             | 56.8    | 872.4    | 739.8             | 50.9    | 790.7    |
| MAAC** Sub Total   |         | 4,673.2           | 495.0   | 5,168.2  | 3,777.1           | 426.9   | 4,204.0  |
| RTO                | AEP     | 1,603.1           | 76.6    | 1,679.7  | 1,416.1           | 72.0    | 1,488.1  |
| RTO                | APS     | 1,039.4           | 29.0    | 1,068.4  | 926.0             | 26.8    | 952.8    |
| ATS/ATSI-C         | ATSI    | 978.0             | 52.8    | 1,030.8  | 897.6             | 41.0    | 938.6    |
| COMED              | COMED   | 1,792.0           | 725.1   | 2,517.1  | 1,757.4           | 724.8   | 2,482.2  |
| RTO                | DAY     | 237.6             | 25.9    | 263.5    | 219.8             | 24.5    | 244.3    |
| RTO                | DEOK    | 248.8             | 31.2    | 280.0    | 236.7             | 24.4    | 261.1    |
| RTO                | DOM     | 816.8             | 190.2   | 1,007.0  | 729.7             | 152.0   | 881.7    |
| RTO                | DUQ     | 286.8             | 15.2    | 302.0    | 247.2             | 14.1    | 261.3    |
| RTO                | EKPC    | 142.3             | 9.3     | 151.6    | 140.4             | 8.6     | 149.0    |
| <b>Grand Total</b> |         | 11,818.0          | 1,650.3 | 13,468.3 | 10,348.0          | 1,515.1 | 11,863.1 |

<sup>\*\*</sup>MAAC sub-total includes all MAAC Zones

Any resource that can qualify as a CP Resource may submit separate but coupled sell offers for CP and Base Capacity product types. When sell offer segments of both capacity product types are coupled with different offer prices, the auction clearing engine will clear only one of the products at most and will clear the product that results in the lowest cost solution for the system. Any Generation Capacity Resource with a unit-specific MSOC above the CP default MSOC must submit separate but coupled sell offers for CP and Base Capacity product types. Table 3C shows a breakdown of offered and cleared capacity for each resource type grouped by



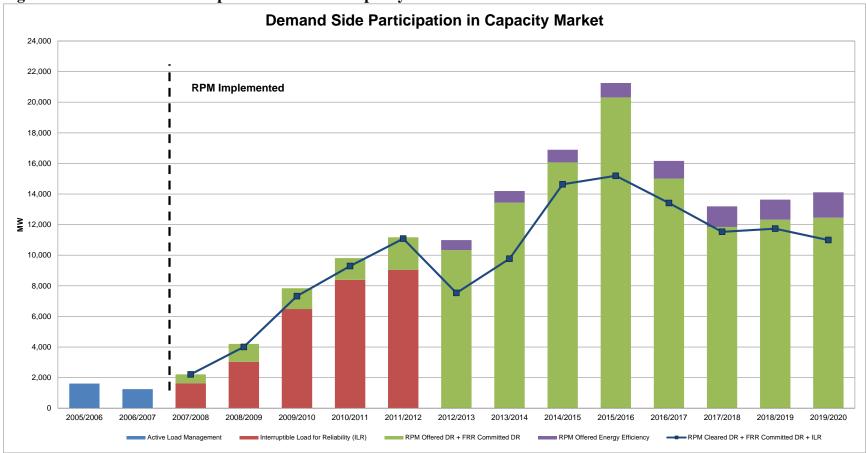
coupling scenario. As shown on Table 3C, 138,635.5 MW or 89.2% of the total cleared generation capacity cleared as CP; 613.7 MW or 5.9% of the total cleared DR capacity cleared as CP; and, 1,058.1 MW or 69.8% of total cleared EE capacity cleared as CP.

Table 3C – Breakdown of Capacity Resources Offered versus Cleared by Product Type in the 2018/19 BRA in UCAP

| -                   |                               | Offered M            | W (UCAP)                                | Cleared MW (UCAP)    |   |  |
|---------------------|-------------------------------|----------------------|---|----------------------|---|--|
| Resource<br>Type    | Product Coupling Scenario     | Base<br>Product Type | Capacity<br>Performance<br>Product Type | Base<br>Product Type | Capacity<br>Performance<br>Product Type |  |
| GEN                 | Capacity Performance and Base | 26,221.3             | 26,821.4                                | 11,831.2             | 12,236.2                                |  |
| GEN                 | Capacity Performance Only     | -                    | 140,219.9                               | -                    | 126,399.3                               |  |
| GEN                 | Base Only                     | 5,023.0              | -                                       | 4,976.1              | -                                       |  |
| GEN Sub Total       |                               | 31,244.3             | 167,041.3                               | 16,807.3             | 138,635.5                               |  |
| DR                  | Capacity Performance and Base | 4,659.4              | 4,317.6                                 | 3,961.9              | 266.7                                   |  |
| DR                  | Capacity Performance Only     | -                    | 404.0                                   | -                    | 347.0                                   |  |
| DR                  | Base Only                     | 6,656.9              | -                                       | 5,772.4              | -                                       |  |
| <b>DR Sub Total</b> |                               | 11,316.3             | 4,721.6                                 | 9,734.3              | 613.7                                   |  |
| EE                  | Capacity Performance and Base | 582.3                | 582.4                                   | 45.2                 | 517.0                                   |  |
| EE                  | Capacity Performance Only     | -                    | 541.1                                   | -                    | 541.1                                   |  |
| EE                  | Base Only                     | 526.1                | -                                       | 411.8                | -                                       |  |
| EE Sub Total        |                               | 1,108.4              | 1,123.5                                 | 457.0                | 1,058.1                                 |  |
| <b>Grand Total</b>  |                               | 43,669.0             | 172,886.4                               | 26,998.6             | 140,307.3                               |  |



Figure 1 – Demand Side Participation in the PJM Capacity Market





#### **Renewable Resource Participation**

969 MW of wind resources were offered into and cleared the 2019/2020 BRA as compared to 857.2 MW of wind resources that offered into and cleared the 2018/2019 BRA. The capacity factor applied to wind resources is 13%, meaning that for every 100 MW of wind energy, 13 MW are eligible to meet capacity requirements. The 969 MW of cleared wind capacity translates to 7,453.8 MW of wind energy nameplate capability that is expected to be available in the 2019/2020 Delivery Year. Of the 969 MW procured from wind resources in the 2019/2020 BRA, 89.4 MW cleared as Capacity Performance product type and 879.6 MW cleared as Base product type.

335 MW of solar resources were offered into and cleared the 2019/2020 BRA as compared to 183.7 MW of solar resources that offered into and cleared the 2018/2019 BRA. The capacity factor applied to solar resources is 38%, meaning that for every 100 MW of solar energy, 38 MW are eligible to meet capacity requirements. The 335 MW of cleared solar capacity translates to 881.6 MW of nameplate solar energy capability that is expected to be available in the 2019/2020 Delivery Year. Of the 335 MW procured from solar resources in the 2019/2020 BRA, 0.4 MW cleared as Capacity Performance product type and 334.6 MW cleared as Base product type.

#### **LDA Results**

An LDA was modeled in the BRA and had a separate VRR Curve if (1) the LDA has a CETO/CETL margin that is less than 115%; or (2) the LDA had a locational price adder in any of the three immediately preceding BRAs; or (3) the LDA is EMAAC, SWMAAC, and MAAC. An LDA not otherwise qualifying under the above three tests may also be modeled if PJM finds that the LDA is determined to be likely to have a Locational Price Adder based on historic offer price levels or if such LDA is required to achieve an acceptable level of reliability consistent with the Reliability Principles and Standards.

As a result of the above criteria, MAAC, EMAAC, SWMAAC, PSEG, PS-NORTH, DPL-SOUTH, PEPCO, ATSI, ATSI-Cleveland, COMED, BGE and PL were modeled as LDAs in the 2019/2020 RPM Base Residual Auction. The EMAAC LDA, ComEd LDA and BGE LDAs were binding constraints in the auction resulting in a Locational Price Adder for these LDAs. A Locational Price Adder represents the difference in Resource Clearing Prices for the Capacity Performance product between a resource in a constrained LDA and the immediate higher level LDA.



Table 4 contains a summary of the clearing results in the LDAs from the 2019/2020 RPM Base Residual Auction.

Table 4 – RPM Base Residual Auction Clearing Results in the LDAs

| Appellant Bassalla                       | DTO       | MAAG      | CVAUNAAAA | DEDGG     | DOE       | <b>51110</b> | DDI GOLITILI | DOEG      | DO NODTU  | ATOL      | ATOLOL EVEL AND | DDI       | COMED     |
|--|-----------|-----------|-----------|-----------|-----------|--------------|--------------|-----------|-----------|-----------|-----------------|-----------|-----------|
| Auction Results                          | RTO       | MAAC      | SWMAAC    | PEPCO     | BGE       | EWAAC        | DPL-SOUTH    | PSEG      | PS-NORTH  | ATSI      | ATSI-CLEVELAND  | PPL       | COMED     |
| Offered MW (UCAP)                        | 185,539.5 | 74,633.0  | 13,299.9  | 6,786.6   | 4,100.7   | 33,228.2     | 1,721.4      | 6,634.0   | 3,726.5   | 11,847.7  | 2,486.7         | 12,106.3  | 26,588.7  |
| Cleared MW (UCAP)                        | 167,305.9 | 64,915.0  | 11,394.6  | 6,248.4   | 2,739.5   | 30,769.3     | 1,598.5      | 5,455.0   | 3,205.3   | 10,291.1  | 2,089.0         | 9,649.6   | 22,971.4  |
| System Marginal Price                    | \$100.00  | \$100.00  | \$100.00  | \$100.00  | \$100.00  | \$100.00     | \$100.00     | \$100.00  | \$100.00  | \$100.00  | \$100.00        | \$100.00  | \$100.00  |
| Locational Price Adder*                  | -         | -         | -         | -         | \$0.30    | \$19.77      | \$19.77      | \$19.77   | \$19.77   | -         |                 | -         | \$102.77  |
| Base Capacity Resource Price Decrement** | (\$20.00) | (\$20.00) | (\$20.00) | (\$20.00) | (\$20.00) | (\$20.00)    | (\$20.00)    | (\$20.00) | (\$20.00) | (\$20.00) | (\$20.00)       | (\$20.00) | (\$20.00) |
| Base DR/EE Capacity Price Decrement      | -         | -         | -         | (\$79.99) | -         | -            | -            | -         | -         | -         |                 | -         | -         |
| RCP for Base DR/EE Resources             | \$80.00   | \$80.00   | \$80.00   | \$0.01    | \$80.30   | \$99.77      | \$99.77      | \$99.77   | \$99.77   | \$80.00   | \$80.00         | \$80.00   | \$182.77  |
| RCP for Base Generation Resources        | \$80.00   | \$80.00   | \$80.00   | \$80.00   | \$80.30   | \$99.77      | \$99.77      | \$99.77   | \$99.77   | \$80.00   | \$80.00         | \$80.00   | \$182.77  |
| RCP for Capacity Performance Resources   | \$100.00  | \$100.00  | \$100.00  | \$100.00  | \$100.30  | \$119.77     | \$119.77     | \$119.77  | \$119.77  | \$100.00  | \$100.00        | \$100.00  | \$202.77  |

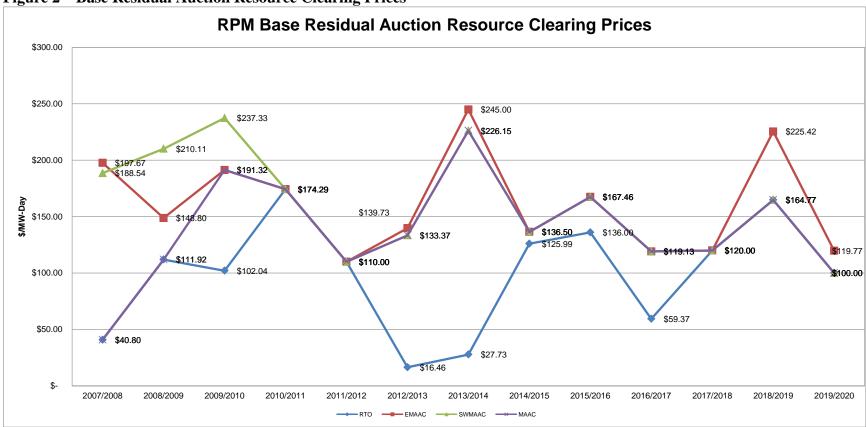
<sup>\*</sup>Locational Price Adder is with respect to the immediate parent LDA

Since the EMAAC LDA, ComEd LDA and BGE LDAs were constrained LDAs, Capacity Transfer Rights (CTRs) will be allocated to loads in these constrained LDA for the 2019/2020 Delivery Year. CTRs are allocated by load ratio share to all Load Serving Entities (LSEs) in a constrained LDA that has a higher clearing price than the unconstrained region. CTRs serve as a credit back to the LSEs in the constrained LDA for use of the transmission system to import less expensive capacity into that constrained LDA and are valued at the difference in the clearing prices of the constrained and unconstrained regions.

<sup>\*\*</sup>Base Generation and Base DR/EE receive the Base Capacity Resource Price Decrement



Figure 2 – Base Residual Auction Resource Clearing Prices



<sup>\*2014/2015</sup> through 2019/2020 Prices reflect the Annual Resource Clearing Prices.



Table 5 contains a summary of the RTO resources for each cleared BRA from 2008/2009 through the 2019/2020 Delivery Years. The summary includes all resources located in the RTO (including FRR Capacity Plans).

A total of 212,401 MW of installed capacity was eligible to be offered into the 2019/2020 Base Residual Auction, with 4,821.4 MW from external resources. As illustrated in Table 5, the amount of capacity exports in the 2019/2020 auction increased by 4.8 MW from that of the previous auction and FRR commitments decreased by 407.7 MW from the 2018/2019 Delivery Year to 15,385.3 MW.

A total of 194,243 MW of capacity was offered into the Base Residual Auction. This is an increase of 4,672.6 MW from that which was offered into the 2018/2019 BRA. A total of 18,158 MW was eligible, but not offered due to either (1) inclusion in an FRR Capacity Plan, (2) export of the resource, or (3) having been excused from offering into the auction. Resources were excused from the must offer requirement for the following reasons: approved retirement requests not yet reflected in eRPM, and excess capacity owned by an FRR entity.



Table 5 - RPM Base Residual Auction Generation, Demand, and Energy Efficiency Resource Information in the RTO

|                                       | RTO <sup>1</sup> |           |           |                        |           |                        |                        |                        |                        |           |           |           |
|---------------------------------------|------------------|-----------|-----------|------------------------|-----------|------------------------|------------------------|------------------------|------------------------|-----------|-----------|-----------|
| Auction Supply (all values in ICAP)   | 2008/2009        | 2009/2010 | 2010/2011 | 2011/2012 <sup>2</sup> | 2012/2013 | 2013/2014 <sup>3</sup> | 2014/2015 <sup>4</sup> | 2015/2016 <sup>5</sup> | 2016/2017 <sup>6</sup> | 2017/2018 | 2018/2019 | 2019/2020 |
| Internal PJM Capacity                 | 166,037.9        | 167,026.3 | 168,457.3 | 169,241.6              | 179,791.2 | 195,633.4              | 199,375.5              | 207,559.1              | 208,098.0              | 202,477.4 | 203,300.6 | 207,579.6 |
| Imports Offered                       | 2,612.0          | 2,563.2   | 2,982.4   | 6,814.2                | 4,152.4   | 4,766.1                | 7,620.2                | 4,649.7                | 8,412.2                | 6,300.9   | 5,724.6   | 4,821.4   |
| Total Eligible RPM Capacity           | 168,649.9        | 169,589.5 | 171,439.7 | 176,055.8              | 183,943.6 | 200,399.5              | 206,995.7              | 212,208.8              | 216,510.2              | 208,778.3 | 209,025.2 | 212,401.0 |
|                                       |                  |           |           |                        |           |                        |                        |                        |                        |           |           |           |
| Exports / Delistings                  | 4,205.8          | 2,240.9   | 3,378.2   | 3,389.2                | 2,783.9   | 2,624.5                | 1,230.1                | 1,218.8                | 1,218.8                | 1,223.2   | 1,313.4   | 1,318.2   |
| FRR Commitments                       | 24,953.5         | 25,316.2  | 26,305.7  | 25,921.2               | 26,302.1  | 25,793.1               | 33,612.7               | 15,997.9               | 15,576.6               | 15,776.1  | 15,793.0  | 15,385.3  |
| Excused                               | 722.0            | 1,121.9   | 1,290.7   | 1,580.0                | 1,732.2   | 1,825.7                | 3,255.2                | 8,712.9                | 8,524.0                | 4,305.3   | 2,348.4   | 1,454.5   |
| Total Eligible RPM Capacity - Excused | 29,881.3         | 28,679.0  | 30,974.6  | 30,890.4               | 30,818.2  | 30,243.3               | 38,098.0               | 25,929.6               | 25,319.4               | 21,304.6  | 19,454.8  | 18,158.0  |
| Remaining Eligible RPM Capacity       | 138,768.6        | 140,910.5 | 140,465.1 | 145,165.4              | 153,125.4 | 170,156.2              | 168,897.7              | 186,279.2              | 191,190.8              | 187,473.7 | 189,570.4 | 194,243.0 |
| Generation Offered                    | 138,076.7        | 140,003.6 | 139,529.5 | 143,568.1              | 142,957.7 | 156,894.1              | 153,048.1              | 166,127.8              | 176,145.3              | 175,329.5 | 177,592.1 | 181,866.4 |
| DR Offered                            | 691.9            | 906.9     | 935.6     | 1,597.3                | 9,535.4   | 12,528.7               | 15,043.1               | 19,243.6               | 13,932.9               | 10,855.2  | 10,772.8  | 10,859.2  |
| EE Offered                            | 0.0              | 0.0       | 0.0       | 0.0                    | 632.3     | 733.4                  | 806.5                  | 907.8                  | 1,112.6                | 1,289.0   | 1,205.5   | 1,517.4   |
| Total Eligible RPM Capacity Offered   | 138,768.6        | 140,910.5 | 140,465.1 | 145,165.4              | 153,125.4 | 170,156.2              | 168,897.7              | 186,279.2              | 191,190.8              | 187,473.7 | 189,570.4 | 194,243.0 |
| Total Eligible RPM Capacity Unoffered | 0.0              | 0.0       | 0.0       | 0.0                    | 0.0       | 0.0                    | 0.0                    | 0.0                    | 0.0                    | 0.0       | 0.0       | 0.0       |

<sup>&</sup>lt;sup>1</sup>RTO numbers include all LDAs.

<sup>&</sup>lt;sup>2</sup>All generation in the Duquesne zone is considered external to PJM for the 2011/2012 BRA.

<sup>&</sup>lt;sup>3</sup>2013/2014 includes ATSI zone and generation

<sup>&</sup>lt;sup>4</sup>2014/2015 includes Duke zone and generation

<sup>&</sup>lt;sup>5</sup>2015/2016 includes a significant portion of AEP and DEOK zone load previously under the FRR Alternative

<sup>&</sup>lt;sup>6</sup>2016/2017 includes EKPC zone



Table 6 shows the Generation, DR, and EE Resources Offered and Cleared in the RTO translated into Unforced Capacity (UCAP) MW amounts. Participants' sell offer EFORd values were used to translate the generation installed capacity values into unforced capacity (UCAP) values. DR sell offers and EE sell offers were converted into UCAP using the appropriate DR Factor and Forecast Pool Requirement (FPR) for the Delivery Year.

In UCAP terms, a total of 185,539.5 MW were offered into the 2019/2020 BRA, comprised of 172,071.2 MW of generation capacity, 11,818 MW of capacity from DR, and 1,650.3 MW of capacity from EE resources. Of those offered, a total of 167,305.9 MW of capacity was cleared in the BRA.

Of the 167,305.9 MW of capacity that cleared in the auction, 155,442.8 MW were from Generation Capacity Resources, 10,348 MW were from DR, and 1,515.1 MW were from EE resources. Capacity that was offered but not cleared in the BRA Auction will be eligible to offer into the First, Second and Third Incremental Auctions for the 2019/2020 Delivery Year.

Table 6 - Generation, Demand Resources, and Energy Efficiency Resources Offered and Cleared in UCAP MW

|  | RTO*      |           |           |           |           |           |           |           |           |           |           |           |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Auction Results (all values in UCAP**) | 2008/2009 | 2009/2010 | 2010/2011 | 2011/2012 | 2012/2013 | 2013/2014 | 2014/2015 | 2015/2016 | 2016/2017 | 2017/2018 | 2018/2019 | 2019/2020 |
| Generation Offered                     | 131,164.8 | 132,614.2 | 132,124.8 | 136,067.9 | 134,873.0 | 147,188.6 | 144,108.8 | 157,691.1 | 168,716.0 | 166,204.8 | 166,909.6 | 172,071.2 |
| DR Offered                             | 715.8     | 936.8     | 967.9     | 1,652.4   | 9,847.6   | 12,952.7  | 15,545.6  | 19,956.3  | 14,507.2  | 11,293.7  | 11,675.5  | 11,818.0  |
| EE Offered                             | -         | -         | -         | -         | 652.7     | 756.8     | 831.9     | 940.3     | 1,156.8   | 1,340.0   | 1,306.1   | 1,650.3   |
| Total Offered                          | 131,880.6 | 133,551.0 | 133,092.7 | 137,720.3 | 145,373.3 | 160,898.1 | 160,486.3 | 178,587.7 | 184,380.0 | 178,838.5 | 179,891.2 | 185,539.5 |
| Generation Cleared                     | 129,061.4 | 131,338.9 | 131,251.5 | 130,856.6 | 128,527.4 | 142,782.0 | 135,034.2 | 148,805.9 | 155,634.3 | 154,690.0 | 154,506.0 | 155,442.8 |
| DR Cleared                             | 536.2     | 892.9     | 939.0     | 1,364.9   | 7,047.2   | 9,281.9   | 14,118.4  | 14,832.8  | 12,408.1  | 10,974.8  | 11,084.4  | 10,348.0  |
| EE Cleared                             | 0.0       | 0.0       | 0.0       | 0.0       | 568.9     | 679.4     | 822.1     | 922.5     | 1,117.3   | 1,338.9   | 1,246.5   | 1,515.1   |
| Total Cleared                          | 129,597.6 | 132,231.8 | 132,190.5 | 132,221.5 | 136,143.5 | 152,743.3 | 149,974.7 | 164,561.2 | 169,159.7 | 167,003.7 | 166,836.9 | 167,305.9 |
| Uncleared                              | 2,283.0   | 1,319.2   | 902.2     | 5,498.8   | 9,229.8   | 8,154.8   | 10,511.6  | 14,026.5  | 15,220.3  | 11,834.8  | 13,054.3  | 18,233.6  |

<sup>\*</sup> RTO numbers include all LDAs

Table 7 contains a summary of capacity additions and reductions from the 2007/2008 BRA to the 2019/2020 BRA. A total of 6,327.8 MW of incrementally new capacity in PJM was available for the 2019/2020 BRA. This incrementally new capacity includes new Generation Capacity Resources and capacity upgrades to existing Generation Capacity Resources. The increase is offset by generation

<sup>\*\*</sup> UCAP calculated using sell offer EFORd for Generation Resources. DR and EE UCAP values include appropriate FPR and DR Factor.



capacity deratings on existing Generation Capacity Resources and an increase in the quantity of offered DR and EE to yield a net increase of 3,803.0 MW of installed capacity.

Table 7 also illustrates the total amount of resource additions and reductions over twelve Delivery Years since the implementation of the RPM construct. Over the period covering the first thirteen RPM BRAs, 46,534.5 MW of new generation capacity was added, which was partially offset by 36,623.4 MW of capacity de-ratings or retirements over the same period. Additionally, 11,297 MW of new DR and 1,517.4 MW of new EE resources were offered over the course of the thirteen Delivery Years since RPM's inception. The total net increase in installed capacity in PJM over the period of the last thirteen RPM auctions was 22,725.5 MW.

Table 7 – Incremental Capacity Resource Additions and Reductions to Date

|                                    |           | RTO*      |           |           |           |           |                        |                        |           |                        |           |           |           |           |
|------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|------------------------|------------------------|-----------|------------------------|-----------|-----------|-----------|-----------|
| Capacity Changes (in ICAP)         | 2007/2008 | 2008/2009 | 2009/2010 | 2010/2011 | 2011/2012 | 2012/2013 | 2013/2014 <sup>1</sup> | 2014/2015 <sup>2</sup> | 2015/2016 | 2016/2017 <sup>3</sup> | 2017/2018 | 2018/2019 | 2019/2020 | Total     |
| Increase in Generation Capacity    | 602.0     | 724.2     | 1,272.3   | 1,776.2   | 3,576.3   | 1,893.5   | 1,737.5                | 1,582.8                | 8,207.0   | 6,806.0                | 6,973.3   | 5,055.6   | 6,327.8   | 46,534.5  |
| Decrease in Generation Capacity    | -674.6    | -375.4    | -550.2    | -301.8    | -264.7    | -3,253.9  | -1,924.1               | -1,550.1               | -6,432.6  | -4,992.0               | -9,760.1  | -3,620.8  | -2,923.1  | -36,623.4 |
| Net Increase in Demand Resource    | 555.0     | 574.7     | 215.0     | 28.7      | 661.7     | 7,938.1   | 2,993.3                | 2,514.4                | 4,200.5   | -5,310.7               | -3,077.7  | -82.4     | 86.4      | 11,297.0  |
| Net Increase in Energy Efficiency  | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 632.3     | 101.1                  | 73.1                   | 101.3     | 204.8                  | 176.4     | -83.5     | 311.9     | 1,517.4   |
| Net Increase in Installed Capacity | 482.4     | 923.5     | 937.1     | 1503.1    | 3973.3    | 7,210.0   | 2,907.8                | 2,620.2                | 6,076.2   | -3,291.9               | -5,688.1  | 1,268.9   | 3,803.0   | 22,725.5  |

<sup>\*</sup> RTO numbers include all LDAs

Table 7A provides a further breakdown of the generation increases and decreases for the 2019/2020 Delivery Year on an LDA basis.

Table 7A - Generation Increases and Decreases by LDA Effective 2019/2020Delivery Year

| LDA Name  | Increases | Decreases |  |  |  |
|-----------|-----------|-----------|--|--|--|
| EMAAC     | 93.0      | (1,275.4) |  |  |  |
| MAAC      | 2,508.9   | (1,736.7) |  |  |  |
| Total RTO | 6,327.8   | (2,923.1) |  |  |  |

All Values in ICAP terms

<sup>\*\*</sup> Values are with respect to the quantity offered in the previous year's Base Residual Auction.

<sup>1)</sup> Does not include Existing Generation located in ATSI Zone

<sup>2)</sup> Does not include Existing Generation located in Duke Zone

<sup>3)</sup> Does not include Existing Generation located in EKPC Zone

<sup>\*</sup>MAAC includes EMAAC

<sup>\*\*</sup>RTO includes MAAC



Table 8 provides a breakdown of the new capacity offered into the each BRA into the categories of new resources, reactivated units, and uprates to existing capacity, and then further down into resource type. As shown in this table, there was a significant quantity of generating capacity from new resources and uprates to existing resources offered into the 2019/2020 BRA. The capacity offered in the 2019/2020 BRA resulted from both new generating resources and uprates to existing resources including gas, diesel, coal, wind, and nuclear resources. The largest growth remains in gas turbines and combined cycle plants.



Table 8 – Further Breakdown of Incremental Capacity Resource Additions from 2007/2008 to 2019/2020

|  | Delivery Year | CT/GT   | Combined Cycle | Diesel | Hydro | Steam   | Nuclear | Solar | Wind    | Fuel Cell | Total    |
|--|---------------|---------|----------------|--------|-------|---------|---------|-------|---------|-----------|----------|
|  | 2007/2008     |         |                | 18.7   | 0.3   |         |         |       |         |           | 19.0     |
|  | 2008/2009     |         |                | 27.0   |       |         |         |       | 66.1    |           | 93.1     |
|  | 2009/2010     | 399.5   |                | 23.8   |       | 53.0    |         |       |         |           | 476.3    |
|  | 2010/2011     | 283.3   | 580.0          | 23.0   |       |         |         |       | 141.4   |           | 1,027.7  |
|  | 2011/2012     | 416.4   | 1,135.0        |        |       | 704.8   |         | 1.1   | 75.2    |           | 2,332.5  |
|  | 2012/2013     | 403.8   |                | 7.8    |       | 621.3   |         |       | 75.1    |           | 1,108.0  |
| New Capacity Units (ICAPMW)                      | 2013/2014     | 329.0   | 705.0          | 6.0    |       | 25.0    |         | 9.5   | 245.7   |           | 1,320.2  |
| , , , ,  | 2014/2015     | 108.0   | 650.0          | 35.1   | 132.9 |         |         | 28.0  | 146.6   |           | 1,100.6  |
|  | 2015/2016     | 1,382.5 | 5,914.5        | 19.4   | 148.4 | 45.4    |         | 13.8  | 104.9   | 30.0      | 7,658.9  |
|  | 2016/2017     | 171.1   | 4,994.5        | 38.3   |       | 24.0    |         | 32.1  | 54.3    |           | 5,314.3  |
|  | 2017/2018     | 131.0   | 5,010.0        | 124.8  | 6.0   | 90.0    |         | 27.0  |         |           | 5,388.8  |
|  | 2018/2019     | 1,032.5 | 2,352.3        | 29.9   |       |         |         | 82.8  | 127.1   |           | 3,624.6  |
|  | 2019/2020     | 167.0   | 6,145.0        | 29.9   |       |         |         | 152.3 | 73.0    |           | 6,567.2  |
|  | 2007/2008     | 101.0   | 5,110.0        | 20.0   |       | 47.0    |         | .02.0 | 7 0.0   |           | 47.0     |
|  | 2008/2009     |         |                |        |       | 131.0   |         |       |         |           | 131.0    |
|  | 2009/2010     |         |                |        |       |         |         |       |         |           | -        |
|  | 2010/2011     | 160.0   |                | 10.7   |       |         |         |       |         |           | 170.7    |
|  | 2011/2012     | 80.0    |                |        |       | 101.0   |         |       |         |           | 181.0    |
|  | 2012/2013     | 00.0    |                |        |       | 10110   |         |       |         |           | -        |
| Capacity from Reactivated Units (ICAP MW)        | 2013/2014     |         |                |        |       |         |         |       |         |           | -        |
| capacity from todourated crime (let it inity)    | 2014/2015     |         |                | 9.0    |       |         |         |       |         |           | 9.0      |
|  | 2015/2016     |         |                | 0.0    |       |         |         |       |         |           | -        |
|  | 2016/2017     |         |                |        |       | 21.0    |         |       |         |           | 21.0     |
|  | 2017/2018     |         |                |        |       | 991.0   |         |       |         |           | 991.0    |
|  | 2018/2019     |         |                |        |       | 001.0   |         |       |         |           | -        |
|  | 2019/2020     |         |                |        |       |         |         |       |         |           | _        |
|  | 2007/2008     | 114.5   |                | 13.9   | 80.0  | 235.6   | 92.0    |       |         |           | 536.0    |
|  | 2008/2009     | 108.2   | 34.0           | 18.0   | 105.5 | 196.0   | 38.4    |       |         |           | 500.1    |
|  | 2009/2010     | 152.2   | 206.0          |        | 162.5 | 61.4    | 197.4   |       | 16.5    |           | 796.0    |
|  | 2010/2011     | 117.3   | 163.0          |        | 48.0  | 89.2    | 160.3   |       |         |           | 577.8    |
|  | 2011/2012     | 369.2   | 148.6          | 57.4   |       | 186.8   | 292.1   |       | 8.7     |           | 1,062.8  |
|  | 2012/2013     | 231.2   | 164.3          | 14.2   |       | 193.0   | 126.0   |       | 56.8    |           | 785.5    |
| Uprates to Existing Capacity Resources (ICAP MW) | 2013/2014     | 56.4    | 59.0           | 0.3    |       | 215.0   | 47.0    |       | 39.6    |           | 417.3    |
|  | 2014/2015     | 104.9   |                | 0.5    | 41.5  | 138.6   | 107.0   | 7.1   | 73.6    |           | 473.2    |
|  | 2015/2016     | 216.8   | 72.0           | 4.7    | 15.7  | 63.4    | 149.2   | 2.2   | 24.1    |           | 548.1    |
|  | 2016/2017     | 436.6   | 420.0          | 3.3    | 7.4   | 484.3   | 102.6   | 1.7   | 14.8    |           | 1,470.7  |
|  | 2017/2018     | 71.9    | 212.5          | 5.1    | 105.9 | 64.8    | 11.0    | 0.4   | 2.1     |           | 473.7    |
|  | 2018/2019     | 33.4    | 548.0          | 2.4    | 22.9  | 11.9    | 79.3    | -     | 14.9    | -         | 712.8    |
|  | 2019/2020     | 29.3    | 72.5           | 3.9    | 5.2   | 65.3    |         |       | 46.8    |           | 223.0    |
|  | Total         | 7,106.0 | 29,586.2       | 527.1  | 882.2 | 4,859.8 | 1,402.3 | 358.0 | 1,407.3 | 30.0      | 46,158.9 |



Figure 4: Cumulative Generation Capacity Increases by Fuel Type

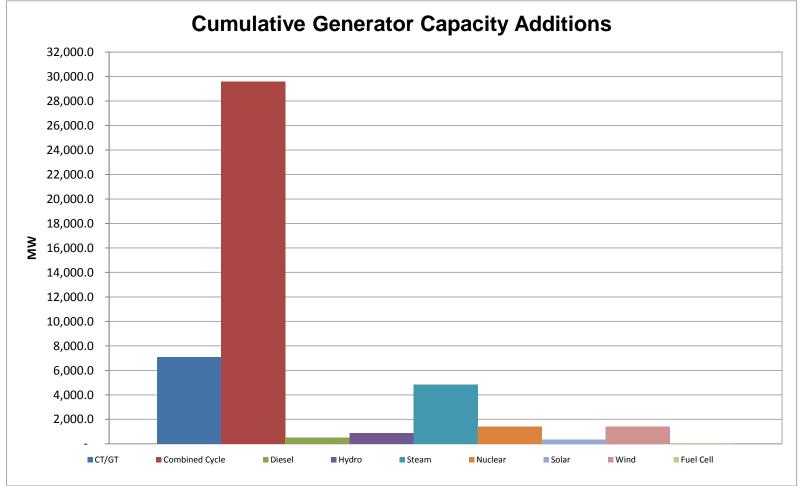




Table 9 shows the changes that have occurred regarding resource deactivation and retirement since the RPM was approved by FERC. The MW values shown in Table 9 represent the quantity of unforced capacity cleared in the 2019/2020 Base Residual Auction that came from resources that have either withdrawn their request to deactivate, postponed retirement, or been reactivated (i.e., came out of retirement or mothball state for the RPM auctions) since the inception of RPM. This total accounts for 4,938.4 MW of cleared UCAP in the 2019/2020 BRA which equates to 7,067.5 MW of ICAP Offered.

Table 9 - Changes to Generation Retirement Decisions since Commencement of RPM in 2007/2008

|                                      | RTO*         |              |  |  |  |  |
|--------------------------------------|--------------|--------------|--|--|--|--|
| Generation Resource Decision Changes | ICAP Offered | UCAP Cleared |  |  |  |  |
| Withdrawn Deactivation Requests      | 2,202.7      | 1,085.4      |  |  |  |  |
| Postponed or Cancelled Retirement    | 3,571.7      | 3,138.5      |  |  |  |  |
| Reactivation                         | 1,293.1      | 714.5        |  |  |  |  |
| Total                                | 7,067.5      | 4,938.4      |  |  |  |  |

#### **RPM Impact to Date**

As illustrated in Table 5, for the 2019/2020 auction, the capacity exports were 1,318.2 MW and the offered capacity imports were 4,821.4 MW. The difference between the capacity imports and exports results is a net capacity import of 3,503.2 MW. In the planning year preceding the RPM auction implementation, 2006/2007, there was a net capacity export of 2,616.0 MW. In this auction, PJM is now a net importer of 3,503.2 MW. Therefore, RPM's impact on PJM capacity interchange is 6,119.2 MW.

The minimum net impact of the RPM implementation on the availability of Installed Capacity resources for the 2019/2020 planning year can be estimated by adding the net change in capacity imports and exports over the period, the forward demand and energy efficiency resources, the increase in Installed Capacity over the RPM implementation period from Table 8 and the net change in generation retirements from Table 9. Therefore, as illustrated in Table 10, the minimum estimated net impact of the RPM implementation on the availability of capacity in the 2019/2020 compared to what would have happened absent this implementation is 65,092.5 MW.



Table 10 shows the details on RPM's impact to date in ICAP terms.

**Table 10 – RPM's Impact to Date** 

| Change in Capacity Availability                                  | Installed<br>Capacity MW |
|--|--------------------------|
| New Generation   | 36,031.2                 |
| Generation Upgrades (not including reactivations)                | 8,577.0                  |
| Generation Reactivation  | 1,550.7                  |
| Forward Demand and Energy Efficiency Resources                   | 12,814.4                 |
| Cleared ICAP from Withdraw n or Cancelled Retirements            | -                        |
| Net increase in Capacity Imports                                 | 6,119.2                  |
| Total Impact on Capacity Availability in 2019/2020 Delivery Year | 65,092.5                 |



#### **Discussion of Factors Impacting the RPM Clearing Prices**

The main factors impacting 2019/2020 RPM BRA clearing prices relative to 2018/2019 BRA clearing prices are provided below, separated out by changes to the demand-side and supply-side of the market.

#### Changes that impacted the Demand Curve:

• The target reliability requirement for the 2019/2020 BRA is 158,984 MW, which is 1,624 MW (1.0%) lower than the target reliability requirement of the 2018/2019 BRA of 160,607 MW.

#### Changes that impacted the Supply Curve:

- Unlike previous BRAs, there are no major environmental rules that are imminent in implementation for the 2019/2020
  Delivery year, though there are permit renewal issues and state specific implementation of environmental rules to consider on items such as coal ash, cooling water intake structures, and updated NAAQS standards that are on the horizon for many existing resources. The now stayed EPA Clean Power Plan would not take effect until 2022, at the earliest, if upheld, which would only have its first effect for the 2021/2022 BRA to be held in 2018.
- In theory, with the transition to the Capacity Performance product, the implied costs of committing to be a Capacity Resource increases due to the need to make improvements in generator performance during Performance Assessment Hours. These increased costs could be related weatherization, improved maintenance, and costs for fuel assurance. One should then expect an upward and leftward shift in the resource supply curve leading to higher capacity market prices overall, all else equal. However, observed offer behavior and discussions with some generation owners since Capacity Performance has been implemented indicate that such costs are lower than expected. In particular, the use of third party marketers to help firm up gas supplies has provided options for ensuring performance that may not have been contemplated prior to Capacity Performance.
- Intuitively one would expect low natural gas prices and low overall energy demand, which have led to lower energy market prices, have also led to lower net energy market revenues across the PJM system, especially for coal and oil steam units as well as nuclear units. Such conditions should be expected to lead to higher capacity market offers from these resources to at least cover going forward costs.



• Relative to last year, there were more new resources offered in the BRA and cleared than the previous year and overall there was more than 4,500 MW of additional resources offered in the 2019/2020 BRA than in the previous year. This has the effect of shifting the supply curve down and to the right which would lower prices, all else equal.



#### NEWARK POLICE DEPARTMENT

| WEEK 05/15/16-05/21/16         | IN           | IVESTIGATIONS | 3    |      | CRIMINAL CHA | RGES        |
|--------------------------------|--------------|---------------|------|------|--------------|-------------|
|                                | 2015         | 2016          | THIS | 2015 | 2016         | THIS        |
|                                | TO           | TO            | WEEK | TO   | TO           | WEEK        |
|                                | DATE         | DATE          | 2016 | DATE | DATE         | <u>2016</u> |
| PART I OFFENSES                |              |               |      |      |              |             |
| a)Murder/Manslaughter          | 0            | 0             | 0    | 0    | 0            | 0           |
| b)Attempt                      | 0            | 0             | o    | 0    | 0            | 0           |
| Kidnap <sup>'</sup>            | 4            | 3             | ol   | 1    | 2            | 0           |
| Rape                           | 3            | 2             | 1    | 1    | 3            | 0           |
| Unlaw. Sexual Contact          | 2            | 4             | Ö    | 1    | 1            | 0           |
| Robbery                        | 18           | 17            | 1    | 18   | 7            | 2           |
| - Commercial Robberies         | 8            | 9             | 1    | 7    | 0            | 0           |
| - Robberies with Known Suspect | 1            | 1             | Ö    | 1    | 0            | 0           |
| - Attempted Robberies          | 2            | 1             | 0    | 5    | 0            | 0           |
| - Other Robberies              | 7            | 6             | 0    | 5    | 7            | 2           |
|                                | <del>-</del> | 6             | -    |      | =            |             |
| Assault/Aggravated             | 2            | 10            | 0    | 12   | 15           | 11          |
| Burglary                       | 21           | 35            | 0    | 13   | 18           | 5           |
| - Commercial Burglaries        | 3            | 9             | 0    | 1    | 0            | 0           |
| - Residential Burglaries       | 16           | 20            | 0    | 11   | 16           | 5           |
| - Other Burglaries             | 2            | 6             | 0    | 1    | 2            | 0           |
| Theft                          | 171          | 270           | 13   | 81   | 71           | 10          |
| Theft/Auto                     | 16           | 15            | 0    | 5    | 8            | 3           |
| Arson                          | 1            | 0             | 0    | 0    | 0            | 0           |
| All Other                      | 26           | 51            | 3    | 34   | 28           | 8           |
| TOTAL PART I                   | 264          | 407           | 18   | 166  | 153          | 39          |
| PART II OFFENSES               |              |               |      |      |              |             |
| Other Assaults                 | 120          | 129           | 4    | 65   | 57           | 2           |
| Rec. Stolen Property           | 2            | 0             | 0    | 11   | 14           | 4           |
| Criminal Mischief              | 76           | 74            | 4    | 34   | 33           | 7           |
| Weapons                        | 5            | 5             | 1    | 41   | 17           | 3           |
| Other Sex Offenses             | 0            | 0             | Ö    | 0    | 0            | 0           |
| Alcohol                        | 113          | 104           | 4    | 186  | 184          | 6           |
| Drugs                          | 30           | 59            | 4    | 99   | 83           | 2           |
| Noise/Disorderly Premise       | 188          | 301           | 8    | 93   | 131          | 5           |
|                                | 71           | 61            | 0    |      | 52           |             |
| Disorderly Conduct             |              |               | 1    | 44   |              | 3           |
| Trespass                       | 62           | 73            | 6    | 31   | 31           | 3           |
| All Other                      | 168          | 200           | 8    | 127  | 134          | 14          |
| TOTAL PART II                  | 835          | 1006          | 40   | 731  | 736          | 49          |
| MISCELLANEOUS:                 |              |               |      |      |              |             |
| Alarm                          | 375          | 334           | 5    | 0    | 0            | 0           |
| Animal Control                 | 172          | 196           | 8    | 0    | 2            | 2           |
| Recovered Property             | 93           | 112           | o    | 0    | 0            | 0           |
| Service                        | 11449        | 13376         | 544  | 0    | 0            | 0           |
| Suspicious Per/Veh             | 200          | 225           | 11   | 0    | 0            | 0           |
| TOTAL MISC.                    | 12289        | 14243         | 568  | 0    | 2            | 2           |
|                                | 12200        | 1 1210        | 000  |      |              |             |
|                                |              |               |      |      |              |             |

THIS

WEEK

<u>2015</u>

860

TOTAL CALLS

2015

TO

DATE

16,245

THIS

WEEK

<u>2016</u>

735

2016

TO

DATE

17,938



## Newark Police Department Weekly Traffic Report 05/15/16-05/21/16



| TRAFFIC<br>SUMMONSES | 2015<br>YTD | 2016<br>YTD | THIS<br>WEEK<br>2015 | THIS<br>WEEK<br>2016 |
|----------------------|-------------|-------------|----------------------|----------------------|
| Moving/Non-Moving    | 3,772       | 4,381       | 214                  | 212                  |
| DUI                  | 82          | 67          | 5                    | 3                    |
| TOTAL                | 3,854       | 4,448       | 219                  | 215                  |

| TRAFFIC ACCIDENTS                |     |     |    |    |
|----------------------------------|-----|-----|----|----|
| Fatal                            | 2   | 0   | 0  | 0  |
| Personal Injury                  | 70  | 94  | 3  | 11 |
| Property Damage (Reportable)     | 179 | 297 | 15 | 12 |
| Property Damage (Non-Reportable) | 150 | 62  | 4  | 3  |
| Hit and Run                      | 111 | 105 | 6  | 3  |
| TOTAL                            | 512 | 558 | 28 | 29 |
|                                  |     |     |    |    |